REPORT RESUMES

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MONROE COMMUNITY COLLEGE CAMPUS PLAN.
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THE MASTER PLANS FOR THE CONSTRUCTION OF THE CAMPUS OF THE NEW MONROE COMMUNITY COLLEGE INCLUDE EDUCATIONAL SPECIFICATIONS, SITE ANALYSIS DATA AND BUILDING PLANS. THE EDUCATIONAL SPECIFICATIONS ARE BASED UPON COMMUNITY NEEDS AND ENROLLMENT PROJECTIONS, AND REFLECT SPACE REQUIREMENTS. IN THE SITE ANALYSIS, FACTORS SUCH AS TOPOGRAPHY, CLIMATE, LOCATION, CIRCULATION, ACCESS, SOILS AND DRAINAGE ARE REVIEWED. THE FACTORS WHICH EXERT THE GREATEST INFLUENCE UPON THE FORM OF THE COLLEGE PLAN ARE PROGRAM, SITE, CLIMATE AND COST. A "WALL CONCEPT" WAS DEVELOPED TO MEET THE CLIMATE, CIRCULATION AND COST PARAMETERS OF MONROE'S BUILDING PLANS. ARCHITECT'S DRAWINGS, CHARTS, MAPS AND LAYOUTS APPEAR THROUGHOUT THE DOCUMENT. INCLUDED IN THE APPENDIX ARE COST AND SPACE BREAKDOWNS. (JP)

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MONROE COMMUNITY COLLEGE

CAMPUS PLAN

CAUDILL ROWLETT SCOTT

EF 000501

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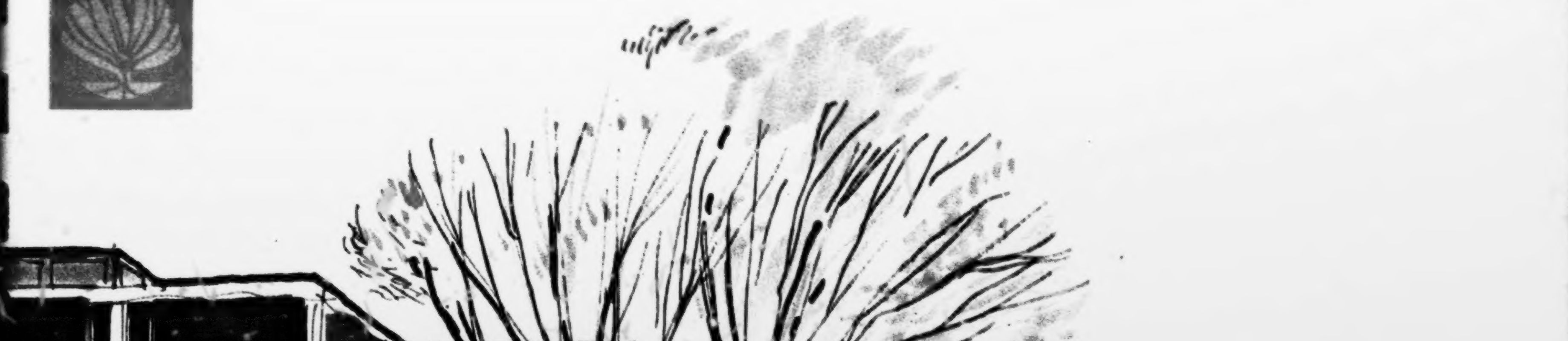

MONROE COMMUNITY COLLEGE

CAMPUS PLAN

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Acknowledgments

The development of a campus plan for Monroe Community College has truly been a team effort. Our role in assisting with campus design has been only a part of a total effort which includes educational programming, site selection, budget estimating, and a host of other activities necessary to the task of establishing a new college campus.

We are grateful for the assistance, advice and encouragement of the Board of Trustees, the College Officials, Officials of Monroe County, and many other groups and individuals who so generously gave of their time to serve as acting members of the planning team.

We are especially indebted to the following individuals for their outstanding cooperation and assistance:

Dr. LeRoy Good, Dr. James Walsh, and Mr. Donald Smith of Monroe Community College for their constant guidance and encouragement throughout the planning process.

Dr. Walter Sindlinger and Dr. Ralph Fields of Columbia University for a most excellent job of educational programming.

Mr. William Steane of Lozier Engineers, Inc., and Mr. B. K. Hough, Consulting Engineer for site soils appraisal and planning of utilities.

The challenge which this plan has presented has been an inspiring one for us. We are grateful for the opportunity, and are proud to be a member of the team.

Caudill, Rowlett, Scott

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PROGRAM

All of the following material in the Program section of this report has been reprinted from the educational specifications submitted by Dr. Ralph R. Fields and Dr. Walter E. Sindlinger, educational consultants for the planning of Monroe Community College. The program is presented in detail to assure that a permanent record will be available for use in implementing the plan and reviewing the basis of its design.

The material has been arranged into the format of the remainder of the report, resulting in some minor revisions of chapter or topic headings. In a few instances, statistical data or historical narrative was rearranged or located in the appendix of the report to facilitate its use. These editorial liberties have been documented in the footnotes.

SCOPE AND ACKNOWLEDGMENTS

Our general task has been to formulate the educational dimensions which must underlie the planning of the Monroe Community College campus. As your consultants, we of course have ideas regarding the community college educational program, and we have interjected these into the planning process as we have thought appropriate. Our major undertaking has been to work with the administrative and teaching staff of Monroe Community College to collect information and formulate ideas regarding the instructional program and the administrative requirements and provisions, to the end that a clear formulation of the educational specifications for the institution would result.

Background

Monroe Community College, when we first started working with the staff towards this end, was preparing for its second year of operation. A doubled enrollment, a hundred per cent increase in faculty, the need for corresponding increases in instructional space yet with no additional building space available -- these were only some of the problems faced. In spite of this situation, we discovered that the staff possessed much of the information needed for the basic educational planning, and were always eager to cooperate in sharing data at hand or in procuring any additional information needed. The Rochester area is a region that has developed an attitude of self-study as the basis for planning, and it has created several agencies to implement this attitude with action. The staff of the Community College had already availed themselves of the several studies of the region and had developed excellent relationships with the planning and study groups.

As a result, the attitude of these organizations was an immediate and enthusiastic cooperation, a readiness to share whatever information or other resources that would prove helpful. Particularly helpful were studies and information furnished by the Monroe Planning council, the Rochester Bureau of Municipal Research, Inc., and the Industrial Management Council.

State university and educational officials also have been intimately concerned in the founding and development of Monroe Community College. On the part of key officials we found an eagerness to help in whatever way feasible. Several devoted considerable time to collecting and sharing studies which had been made of the Rochester region: Executive Dean Paul Orvis of the State University of New York and Associate Dean Kenneth Doran; Dr. E. K. Fretwell, Associate Commissioner for Higher Education, and Dr. S. V. Martorana, Chief of Planning for Higher Education of the New York State Department of Education.

Organization

We have formulated our report on educational specifications into five major sections. The first deals with Monroe Community College and the area to be served. In the second, enrollment projections are presented; these represent the foundation for all educational planning. In the third section, the enrollment projections are translated into estimates of the instructional rooms needed. In the fourth, other instructional facilities and the space for administrative personnel are presented. In the fifth, a brief summary is presented.

MONROE COLLEGE AND THE AREA TO BE SERVED

The Community College Idea

The liberal arts college, the original American institution of higher education and still the backbone of higher education in many of the states, is now flanked and topped with almost a myriad of additional institutions created to meet the seemingly insatiable demand for higher education: the private, state, and municipal universities; land-grant colleges and state colleges rapidly being extended into institutions offering graduate and professional work; teachers colleges rapidly being broadened into multi-purpose state colleges; professional colleges and technical institutes.

The youngest and fastest growing institution of higher education is the community college. During the early part of the twentieth century the public junior college brought the first two years of college into many American communities; gradually the junior college has developed into the community college which strives to meet the needs for higher education of all community members.

One of the present consultants has summarized the characteristics of this institution as follows:

"First, the community college is a unique American institution, an upward extension into the college level of the tradition and spirit and belief in educational opportunity for all which gave us first the elementary school and then the public high school. Its heritage is democratic and so are its practices. In general, its cost to students is lower that that of other colleges, both because its tuition is either free or very low and because students can live at home while they attend college in their own community. It is democratic in that it is socially as well as geographically accessible. Most important of all, it serves the essential democratic function of offering additional education to a wide range of students through flexible admission policies.

"The community college is rightly termed a 'comprehensive' college rather than a 'single-purpose' institution. The purposes typically envisioned are to prepare some students for advanced college study, to prepare others for their vocations, to offer to all an appropriate general education, and to serve the community. Typical also is the enrollment of as many adults as college-age youth. Such comprehensive purpose demand a breadth of program beyond the ordinary, and this broadened program the typical community college has developed, almost of necessity.

"The community college is rooted in its locality. Its control is primarily in the hands of local people, operating under state provisions. Its support, too, is in large measure from the community, supplemented in the case of public colleges by state taxation. Other resources from the region are typically utilized, and in turn the physical and human resources of the college are put to the purpose of improving community life.

"Lifelong education is the concern of the community college rather thatn just a two-year period in the life of older youth. When community members confront problems in their lives, they can generally find that the college offers a helpful educational service. Whether the problem is civic or social, personal or group, vocational or cultural -- if education is helpful, the community college is ready to serve.

"To fulfill these purposes, and to perform these functions, the community college must be adaptable, both in the sense of adjusting and in the sense of modifying fittingly. As new purposes are undertaken, new programs are developed. As individuals with great differences are served, additional offerings are developed, old programs are modified, new methods are demanded. As new fields are entered, new types of instructors are found. In all these ways the community college has adapted itself to changed and changing demands.

"Because of the very nature of the movement, no two community colleges can be exactly alike. Each college is a reflection of the community served, the purposes sought, the functions undertaken, the resources at hand."[1]

Philosophy and Purpose

Monroe Community College has developed a philosophy in harmony with the characteristics of the movement out of which it is born, but with its own commitments. President LeRoy Good and his staff have formulated them as follows:

"'Let Each Become All He Is Capable of Being,' the motto of the State University of New York, characterizes the philosophy and purpose of Monroe Community College. Belonging to the citizens of Monroe County who support it and who are served by it, the College exists to provide for as many of the residents of the county as possible, within their capabilities, two-year programs of higher education. Accepting its responsibilities to the national and local community, the College endeavors to educate students for their own self-realization and for the well-being of the society which will be nurtured by their talents and from which they will draw sustenance. In such an enterprise the commitments of the College to quality, opportunity, diversity, social responsibility and career direction, have been specified by statute, by the community, and affirmed by the trustees, administration, and faculty.

"Quality of education, marked by excellence of instruction and appropriate standards of student achievement in all curriculums, is the foremost commitment of the College. To this end the selection of faculty, facilities for instruction, and a high expectancy for student performance reflect the standards of a community which honors excellence in higher education.

"Opportunity in higher education for the many is essential to the philosophy of Monroe Community College. Recognizing that the democratic ideal cannot flourish when education beyond the secondary school is limited to a financial, social or intellectual elite, the College fosters a liberal admissions policy designed to extend educational opportunity to students who show a potential for achievement. Once admitted to the College, the student is offered the maximum of opportunity to develop that potential. Only achievement, however, will determine the success of his performance.

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[1] Ralph R. Fields, The Community College Movement, McGraw-Hill Book Co., Inc., 1962.

"Diversity of educational program represents a further commitment of the College. To provide for student needs, Monroe Community College, therefore, offers two-year university-parallel curriculums in liberal arts, science, engineering and business administration, as well as two-year curriculums in career, business and various technologies to prepare graduates for immediate employment in the highly diversified organizations and firms of the Rochester and Monroe County areas. Credit and non-credit courses, moreover, are available as adult and community service part-time programs in the Evening Division of the College.

"Social responsibility is inherent in any program of higher education if the citizen is to expose that education to the test of practice in the national and local community. To this end the College requires that all associate degree candidates participate in a substantial program of general education in the humanities, social sciences, mathematics, science, and physical education directed to skills development and purposeful use of leisure. Varsity and intramural sports, social events, dramatic productions, and student clubs and organizations balance the total educational program. The Student Government Association, to which all students belong, organizes, supports, and directs a varied program on its own initiative and responsibility.

"Career direction, the counseling and guidance function of the College, is available through a wide range of services from pre-admission counseling, student orientation and course planning, through testing and guidance for the clarification of educational and career goals, and eventually through placement.

"The committment of the College to quality, opportunity, diversity, social responsibility, and career direction is real and vital."

Area to be Served

Monroe County and the City of Rochester comprise the center of the Rochester Economic Region, one of the twelve such regions into which the State of New York is divided. State authorities have designated the following counties comprising this region: Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates. Just under a million population of this Region are substantially all within an hour's driving time of the Monroe Community College campus site, so efficient is the area's system of highways.

Rochester is well served by modern transportation facilities. Air travel from Chicago and New York is very good. Although decreasing, rail travel is still important, and harbor facilities on Lake Ontario, coupled with the New York Barge Canal, are important both for freight and pleasure purposes. The New York Thruway and an excellently planned system of expressways puts Rochester and the entire area in an enviable situation so far as bus transportation and private automobile usage are concerned.

Industrial-Economic Climate

The nine county region is a rich agricultural area with the Rochester metropolitan area as its commercial and industrial heart. The region is very favorable for growing cash crops and for dairy and poultry farming. Monroe County, because of Rochester, is predominatly an urban county, with some 87 per cent of its population so categorized.

Rochester is wealthy city as measured by almost any criterion. In 1960, its median family income was highest among the metropolitan areas of New York State; its average spendable income per household of $8,014 was far in excess of the national average of $6,723; 23 per cent of its incomes were above $10,000, which figure also was the highest in New York; the average weekly earnings of its manufacturing industry employees was $100.68 compared to $89.72 for the United States; 70 per cent of the occupied dwelling units are owner occupied compared with 51 per cent for all metropolitan areas in the United States.

Rochester is a city devoted primarily to light manufacturing, products with a very high per unit value but low weight and bulk. The original Eastman Kodak industry, which gave it world prominence in the manufacture of photographic cameras and supplies, has been augmented by technical manufacturing of many kinds to the point where Rochester leads the world in making optical goods, dental equipment, thermometers, check protectors, control instruments and recording devices and the like. But it also has a wide variety of manufacturing, ranking high in such diverse fields as men's clothing, buttons, food and dairy processing equipment, office supplies, plastics, pharmaceuticals, and chemicals, among others.

This type of industry and the accompanying financial and commercial pursuits demand on the whole a more highly educated manpower than the average. And it is estimated that in the immediate future an even greater proportion of the manpower needed will be in the professional and technical categories. Conditions of employment are reported as very good, wages high, labor relations among the best, and employment stability very high.

Particularly important for the future of the Community College is the high level of education needed for employment and the college-going expectancy of families of this status.

Cultural and Educational Setting

In light of the economics of the area, a high degree of cultural and educational development would be expected, and this is distinctly the case. Details of the cultural life would be out of place in this report; the important implication is that while the Community Colege will not face the task of filling a cultural vacuum, it will be expected to take its appropriate place in the artistic and aesthetic development of Rochester.

Monroe College and The Area To Be Served

Prior to the opening of Monroe Community College, a study revealed that a majority of the high school graduates of Monroe County continued their education beyond high school.[2] Approximately 40 per cent attended within the County, 40 per cent attended New York institutions outside the County, and 20 per cent attended institutions outside the State of New York. Precisely comparable data were not available for the entire Rochester Economic Region, but since data regarding potential enrollment for the entire Region will be reported in a later section, they were not deemed essential with respect to assessing the higher educational facilities already available.

The institutions in the Region offering higher education are as follows:

- Brockport State College
- Catherine McAuley Junior College
- Colgate-Rochester Divinity School
- Geneseo State College
- Nazareth College
- Roberts Wesleyan College
- Rochester Institute of Technology
- St. Bernard's Seminary and College
- St. John Fisher College
- University of Rochester

The institutions of higher education in the area tend to run heavily to private, although there are two four-year public state institutions, Brockport and Geneseo. As these develop strong arts and science offerings in harmony with the state plans already under implementation, students eligible for admission to these institutions will be able to make their choice between Monroe Community College and either the Brockport or Geneseo state colleges. Transfer of students will be facilitated through cooperative planning between Monroe Community College and these institutions which is already under way.

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[2] Rochester Bureau of Municipal Research, Inc., Background Information on the Question of a Community College for Monroe County, April, 1960.

Transfer to the private institutions will vary according to particular institutions and specific individuals. All the four-year colleges and universities have evidenced a willingness to accept transfers from Monroe Community College in appropriate circumstances. While perhaps not nearly as heavy traffic will develop with any of the private institutions as with the two public state colleges, clear path-ways are being established and will be optioned by some students.

ENROLLMENT PROJECTIONS

Estimating Total Enrollment

The problem of estimating the future enrollment of any institution is as complex and difficult as it is important in planning for its future. The task with respect to a community college is perhaps no more difficult than with most institutions of higher education, but it certainly is no less so. Many factors will affect the actual enrollment: population trends of the region, holding power of the high schools in the area, the industrial-economic development of the region, the educational reputation and the prestige of the community college, the programs introduced, the attractiveness or unattractiveness of the campus itself.

The typical projection method is to calculate minimum and maximum enrollments, and then for planning purposes take one or another or the midpoint or some other point in between. Some authorities have ventured the advice that for planning program and staff and site acquisition, relatively optimistic projections should be used, but for facilities, relatively conservative. Our opinion is that while minimum and maximum calfulations should be made to establish the range of possibilities, the most realistic assessment possible should be attempted in the effort to establish the most probable enrollment projections. It is our observation in the two-year public junior college field that the errors of estimate have consistently been on the too-conservative side, and that community colleges are suffering greatly from lag in buildings and other facilities as a result. We know of no community colleges that are "over-built."

On the other hand, any specific community college must utilize its resources, which are almost always less than adequate for all the demands that exist, in the wisest possible manner. Just as it would be foolish to spend thousands on attracting highly qualified staff and then hamper and retard their teaching through lack of facilities, it would be equally unwise to sink resources in facilities that would turn out to be infrequently utilized.

Bases for Estimating Total Enrollment

For community colleges, which draw the major part of their full-time enrollment from the high schools of the region, the most feasible way of calculating estimates of full-time enrollment is to establish in some fashion the most likely proportion of the high school graduates who will enroll in the local college. This seems to be the most appropriate method for calculating the Monroe Community College potentials.

Several sources of information were available regarding the number of high school students likely to graduate from the high schools of Monroe County and the other eight counties of the Rochester Economic Region. The Rochester Bureau of Municipal Research, Inc., in their 1960 inquiry on the question of a community college for Monroe County, calculated minimum and maximum estimates, 1960 through 1970. They utilized the mid-point as the basis for their recommendations. From the State Department of Education Several studies were available: one conducted in 1956 and included in the department's publication Needs and Facilities in Higher Education in New York State; another conducted for the Heald Commission in 1960, which reported actual and estimated high school graduates by economic area and by metropolitan areas, 1951-52 through 1974-75; and another study, not yet completed, of high school graduates and college-age population by regions and counties, projected to 1980.[3]

These various studies were carefully compared, year by year and county by county. The state department estimates varied from each other very little, less than five per cent on any specific year. The variance between the Rochester Bureau's and the state department estimates was very little for the early years, but grew larger until in 1970 it amounted to 17+ per cent. This seemed primarily due to the fact that state department estimates were consistently adjusted to a rising holding power in the high schools; the Bureau's mid-point technique tended to be conservative in this respect.

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[3] The projections made for the Heald Commission had been shared with one of the consultants at the time he was preparing a working-paper on community colleges in New York for that body; the tallies of the 1963 study, unfinished, were supplied to us by Dr. S. V. Martorana of the State Department of Education.

From this examination it seemed appropriate to utilize as the estimates of high school graduates in the Rochester Economic Region, those of the State Department of Education, since these were the latest and the most comprehensive figures, covering as they did all the nine counties and up to the year 1980.

Estimating the proportion of high school graduates who will enter the community college constitutes the second problem in projecting full-time enrollment. Around the country the variation is wide indeed. Some colleges enroll as high as three-fourths of the high school graduates of the area served; others enroll as few as five percent. In New York the two-year community colleges which have been established for a few years tend to run around twenty per cent, although some are now beginning to go beyond that figure.

In estimating the percentage for Monroe Community College, several lines of reasoning tend to push the potential upward, at least for the Rochester metropolitan area. There is already a high college-going expectancy; as the Community College becomes established and highly visible on its new campus, it is likely to attract a substantial proportion of high school graduates who in the past would have gone elsewhere in the state and nation. The high income status also supports an increasing college-going proportion of high school graduates. The distance from Rochester to the two state university colleges lends credence to the belief that a substantial proportion of graduates in the Rochester metropolitan area may choose the "two-years-at-home, two-years-away-to-college" pattern over the "four-years-away-in-dormitory" pattern stressed by both Geneseo and Brockport. The distance to the nearest two-year colleges with technical programs is sufficient that only a minor proportion of the residents of the nine-county area would find commuting to Buffalo or Syracuse preferable to Rochester, and these mostly in the outlying sections of the in-between counties, i.e., Genesee, Wyoming and Orelans to the west, Wayne and Seneca to the east. The commuting patterns for the major portion of the nine-county area are toward Rochester, evidenced by the newspapers taken, shopping habits, and job holding.

Furthermore, the full offering in liberal arts and in technical career programs should prove an attractive feature. Students tend to attend nearby institutions when they can secure the program desired. Monroe Community College's range of offerings already is impressive; within two to three years, or as soon as facilities are available, it will be unusually comprehensive. An additional factor is the intention of Rochester Institute of Technology to diminish its offering in the two-year category over the future years, in reality relinquishing certain areas to the Community College. Few new community colleges have been born into such favorable circumstances regarding technical offerings. And finally, the in-migration of high grade professional and technical manpower means an increasing emphasis on college-going, both for liberal and technical education.

A study of population reveals an important pattern in its implication for calculating ratios. The nine-county area by 1980 is estimated as growing from its present less-than-a-million to 1,310,200, a healthy increase. But the comparison of Monroe County with the other eight reveals, for instance, that between 1950 and 1960 Monroe's increase was 20 per cent while the eight counties increased around 12 per cent. The rate of increase for 1970 is calculated to follow this pattern. Therefore the heavier increases in high school graduates wanting to go to college will be within a relatively short commuting distance to Monroe Community College.

Following the procedure of establishing likely minimum and maximum estimates, we estimate that for Monroe County itself 15 per cent of the high school graduates coming to Monroe Community College would be a minimum, 25 per cent a maximum to be expected, within the early years at least.[4] With respect to the eight outlying counties, a minimum of 5 per cent and a maximum of 10 per cent is felt to be a reasonable range.

Utilizing these, minimum and maximum numbers for entering freshman classes were calculated as per Table I. It was then estimated that a 50 per cent retention of those who entered into the second year would be a reasonable expectancy. Rather than following the usual 'minimum-maximum" procedure for the next step, an estimate was calculated by using for each year a round figure of entering freshmen somewhat near the midpoint between the minimum and maximum potentials. It was then estimated that a 50 per cent retention of those who entered as freshmen into the second year would be a reasonable expectancy. Columns 10, 11 and 12 result as an application of these calculations to the high school graduates.

These calculations were felt by the Monroe Community College to represent a conservative estimate, and they are so labeled on the table. It was further desired that an estimate utilizing the 25% and 10% freshman entrants be calculated for the years following the move onto the new campus; this is presented in columns 13, 14 and 15. It is labeled "Possible" enrollments rather than "maximum" because of the feeling that there is some likelihood that more than 25 per cent of the Monroe high school graduates may be attracted into the College. While we do not feel this enrollment estimate is quite the "probable" enrollment, we are presenting it as distinctly possible, and the "conservative" estimate as the one we feel will almost surely be surpassed just as soon as facilities are available to allow for admitting all qualified applicants.

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[4] President Good fells that after the College is firmly established, the goal of 40 per cent of Monroe County high school graduates would be a reasonable maximum. Enrollment data for the early years on the new campus will be available in re-calculating long-range enrollment potentials before campus additions will be necessary.

TABLE I

ESTIMATES - MONROE COMMUNITY COLLEGE POTENTIAL ENROLLMENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Year	H.S. Grads.*		Freshmen Minimum Potentials			Freshmen Maximum Potentials			Conservative Estimate			"Possible" Enrollments		
	Monroe	Other	15% Monroe	5% Other	Total	25% Monroe	10% Other	Total	Fresh.	Soph.	Total	Fresh.	Soph.	Total
1963	6500	4200	975	210	1185	1625	420	2045	1400	-	1400	1100	300	1400
1964	8300	5100	1245	255	1500	2075	510	2585	1900	700	2600	1200	550	1750
1965	9000	5500	1350	275	1625	2250	550	2800	2100	850	2950	2350	600	2950
1966	8400	5300	1260	265	1525	2100	530	2630	2000	1050	3050	2630	1175	3805
1967	8600	5300	1290=	265	1555	2150	530	2680	2100	1000	3100	2680	1315	3995
1968	9000	5400	1350	270	1620	2250	540	2790	2200	1050	3250	2790	1340	4130
1969	9600	5600	1440	280	1720	2400	560	2960	2300	1100	3400	2960	1395	4355
1970	10100	5800	1515	290	1805	2525	580	3105	2450	1150	3600	3105	1480	4585
1975	12200	6500	1830	325	2155	3050	650	3700	2900	1225	4125	3700	1552	5252
1980	12900	7000	1935	350	2285	3225	700	3925	3100	1450	4550	3925	1850	5775

*Source: N. Y. State Department of Education, 1963 figures, rounded to nearest 100.

From these data it is reasonable to conclude that Monroe Community College will reach an enrollment near the 4000 figure relatively soon after the new campus is occupied, say within five years. This has caused us to concur in the abandonment of the plan first discussed for a three-stage building program for enrollments of 3,000, 4,500 and 6,000 in favor or a two-stage program for enrollments of 4,000 and 6,000. Under the three-stage program first discussed, the second stage would have been on the College so quickly, if the "possible" enrollment projections were approached, that the first several years would have become a period of almost continuous construction. Such a period, even when most efficiently administered, is a very disruptive experience. By planning for an initial campus for 4,000, on the other hand, the period after moving onto the new campus becomes one of developing program within available facilities, a highly desirable alternative.

Campus facilities have therefore been estimated on the basis of an initial enrollment of 4,000 and a long-range estimate of 6,000.

Enrollments by Programs

Important to the planning of facilities is the manner in which the total enrollment breaks down into major programs. The estimating of program enrollments in some respects is more difficult than the estimating of total enrollment. We secured from the administrative staff the description of programs already approved by the State University of New York, and their estimates of the programs which were the most likely ones to warrant early attention. We then translated these data into a projected enrollment breakdown into programs at the 4,000 and the 6,000 total enrollment levels, balancing objective data regarding community needs against what was feasible within a few short years in developing new programs, and the number of such programs that a total enrollment of 4,000 would justify, and the number that a total enrollment of 6,000 would justify. These estimates were submitted to the Community College administrative staff, and discussed fully by them. Adjustments were made in light of their opinions. Table II thus represents the best judgment of the administrators and the consultants. Some variation would be expected, but it is felt highly probable that these programs will be attempted within a reasonable period after moving to the new campus, and that in all cases there is a good chance that they will draw enrollment sufficient to justify their continuance. In other words, while an enrollment of 90 might turn out to be 75 or 100, or that a 20 might be 15 in early years and 25 to 30 after a few years, facilities for those programs should be included in the first stage of the campus construction and for approximately the enrollment indicated.

Staff judgments have been based on community conditions, employment statistics, studies of employer opinions, and in some cases deliberations with advisory committees. We consider the opinions to be well considered and based on the available data.

TABLE II

ESTIMATES OF ENROLLMENTS BY PROGRAM AT THE 4000 ENROLLMENT STAGE

	First-Year Students			Second-Year Students		
	Subjects	Groups	Totals	Subjects	Groups	Totals
Total Enrollment			2600			1400
Transfer Programs			1120			600
Liberal Arts		810			460	
Humanities & Social Sci.	630			370		
Science-Chemistry	60			30		
Math-Physics	60			30		
Science-Biology	60			30		
Business Administration		250			120	
Engineering Science		60			20	
Contract Nurses			180			
Career Programs						
Accounting	90			60		
Marketing	60			40		
Secretarial Science	120			70		
Chemical Technology	60			40		
Civil & Construction Tech.	20			10		
Data Processing	120			60		
Dental Technology	60			40		
Electrical Technology	60			40		
Electronics	60			30		
Optical Technology	60			30		
Fire Technology	20			10		
Food Technology	20			10		
General Education						
Nursery & Family Life	60			40		
Mechanical Technology	60			40		
Drafting & Design	120			70		
Nursing	240			170		
Park Management	20			10		
Police Science	20			10		
Recreational Supervision	30			20		

INSTRUCTIONAL SPACE REQUIREMENTS

Background

A great deal of work has been done on the problem of translating enrollment projections into space requirements, particularly for high schools. The primary factors are average size of class for each subject area, the total enrollment in the subject, the number of hours per week students will attend the special class involved, the total number of instructional periods per week, and the average level of utilization of space. Formulas have been devised for the computing of special instructional space needed when these primary factors are established. The use of formulas assumes fairly uniform procedures, however.

In the case of Monroe Community College, a new institution with the faculty evolving not only its program but its teaching procedures, the ideal procedure would be to work with the faculty over a period of years, evolving not only the program but the instructional procedures and from them the room and equipment needs. A period of years is not possible; the necessity of constructing the new campus as soon as possible is the determining factor, so that the period is one of months rather than years.

Procedure

Nonetheless the consultants as well as the administration of Monroe Community College firmly believe that the faculty must be the final determiner of the kind of instructional space needed. Toward this end, to enable the architects to calculate the space needs in gross, the consultants and administrative staff have estimated room needs, utilizing existing programs where they do exist and projecting possible program designs where they do not, and formulating instructional policies as temporary guide lines. Ultimately, the faculty will be the determiners of these programs and policies, and so concurrent with these preliminary estimates, the consultants and the administrative staff began a series of meetings with the faculty to consider the fundamental questions of the direction of development for Monroe Community College, the programs to be considered, the instructional policies to be evolved, and the instructional rooms and equipment to be planned.

In this situation a formula approach based on established practice seemed unwise. The consultants and the administrative staff have worked together in taking the steps to be described. The consultants took the lead in outlining these steps, presented them to the staff for discussion and revision, and actually worked through the first application as a model. The administrative staff of Monroe Community College, working from this revised model, then assumed responsibility for translating the steps into final calculations and for checking these results in every way possible. The estimates of instructional rooms represent these cooperative efforts.

The clearest way, in our opinion, to detail the procedure followed is to describe it step-by-step.

Step One

From the enrollment projections we have not only the total enrollments envisioned but the enrollments program by program. It is from the latter that enrollments by subjects have been calculated. In essence the major assumptions made are (1) that these programs will draw students in somewhat the numbers indicated, and (2) that the variations in enrollment from the projections will not be sufficiently severe to destroy their value as a guide for planning space.

Step Two

The actual or proposed curriculum for each program was utilized to calculate the number of students to be enrolled in each subject taught. For example, the freshman curriculum for liberal arts students majoring in humanities and social science is the same: required courses in English, social science, foreign language, mathematics and science. For the purpose of calculating room needs, only one of these categories needs to be broken down further -- the science area, where students would have a choice between biology and chemistry.[5] For this stage of estimating the assumption was made that those students would enroll in biology and chemistry in the ratio of two to one. Thus we have enrollments of:

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[5] Students would also choose among the foreign languages offered, but since all of these would be taught in the same type of room, no breakdown of enrollment among the languages is necessary.

English	630[6,7]
Freshman Social Science	630
Foreign Languages	630
College Mathematics	630
Biology	420
Chemistry	210

This calculation was performed for each program. Electives were first tallied as a single entry, then a list of all subjects that might be taken as electives was made. Each subject was then weighted as follows: 0 = unlikely to be chosen by more than a rare individual or two; 1 = likely to draw a modest number; 2 = likely to draw substantially; 3 = likely to drawn heavily as an elective. The weightings for all the possible electives were totaled, and that number divided into the total potential enrollment for electives, resulting in a factor to be applied to each weighting. To each subject was added the enrollment that resulted from multiplying the weight given to the subject (i.e., 0, 1, 2, or 3) by the factor.

Step Three

The enrollments by curriculums for each program were then collected by specific subjects, grouped by broad fields, e.g., freshman English, English Literature, American Literature, Creative Writing, Journalism, Speech, Dramatics, and Technical Report Writing for the field of English Language.

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[6] 630 is the number of Humanities and Social Science majors, Table II.

[7] This is enrollment for the year in all cases. Semester subjects were calculated and then for totaling purposes it was assumed enrollment in a semester subject would divide equally between first and second semester, so for our calculations one-half the enrollment was included for each semester subject.

Step Four The subject enrollments were next translated into hours of instruction per week in the type of room needed for that subject. For room-estimating purposes, some assumptions regarding the nature of instruction in subjects had to be made, even though it is recognized that the faculty in each instructional areas will have to render the fundamental decision before the interior of each building can be planned by the architect. For instance, in Freshman English it has been assumed that each student will be in a classroom, maximum size of 25, for two instructional periods a week, and then in a language laboratory (maximum size 25) for one period per week.[8]

Step Five Table III could not be constructed, with an entry for each different type of room. For example, as a beginning, separate calculations have been made for English, foreign language, a speech-drama classroom studio, social business, and mathematics classrooms, even though all are for 25. Ultimately, it is hoped that there will be some major differences in rooms for the same size planned for different subjects even though for scheduling purposes they will have to be used by other groups at times. The purpose here is to stimulate faculty groups to think through specific instructional activities so that room-planning can reflect the arrangements and equipment needed.

Estimates and best guesses are involved in constructing Table III. For instance, vocal and instrumental music classrooms are included at this stage without, it is recognized, sufficient utilization to warrant them. But their inclusion should be considered carefully in an area as culturally oriented as Rochester.

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[8] The detailed list of tentative assumptions in the consultant's report has not been reproduced in this report, but is available in College files.

TABLE III

SUMMARY OF INSTRUCTIONAL ROOMS ENROLLMENT OF 4000

1 Type of room	2 Subject taught	3 No. of rooms	4 Seating Capacity	5 No. of students	6 Student number instr. hrs. in week	7 Capacity student hrs. per week	8 Utilization student hrs. divided by capacity
Large Lecture	English, Social Studies, Business, Acc., Nursing	1 3	600 100	6500	13,200	24,000 12,000 36,000	37%
English Disc.	English	20 (17)	25	3690	10,340	20,000	52% (61%)
English Lang. Lab.	English	8 (7)	15	2600	2,600	4,800	54% (62%)
Seminar	Social Studies	14 (11)	15	4260	4,260	8,400	51% (65%)
Psych. Lab. Disc.	Psychology	3 (2)	30	920	920	2,400	38% (38%)
Lecture Disc.	Social Studies and Lecture Courses	5 (4)	25	880	2,640	5,000	53% (66%)
Large Lecture	Science	1 1	300 100	2980	5,960	12,000 4,000 16,000	37%
Lab.	Biology	5 (4)	20	680	1,830	4,000	46% (57%)
Lab.	Anat. & Phys.	3	20	420	1,260	2,400	53%
Lab.	Microbiology	2	20	240	720	1,600	45%
Lab.	Gen. Chem.	5 (4)	20	800	2,200	4,000	55% (69%)
Lab.	Organic Chem.	1	20	30	150	800	19%
Lab.	Physics	4 (3)	20	620	1,480	3,200	46% (62%)
Conf. Room	Science	4 (3)	20	1645	1,645	3,200	51% (69%)
Lect. Disc.	Language	6 (5)	25	1100	3,300	6,000	55% (66%)
Lab.	Language	3 (2)	25	1100	1,100	3,000	37% (55%)
Lect. Disc.	Math.	12 (10)	25	2110	6,330	12,000	53% (63%)

1	2	3	4	5	6	7	8
Type of room	Subject taught	No. of rooms	Seating Capacity	No. of students	Student number instr. hrs. in week	Capacity student hrs. per week	Utilization student hrs. divided by capacity
Lab.	Math.	3 (2)	25	545	1,095	3,000	37% (55%)
Lab.	Journalism	1	20	100	300	800	37%
Studio	Speech-Drama	2 (1)	25	200	600	2,000	30% (60%)
Studio	Art	1	20	160	480	800	60%
Studio	Arts & Crafts	1	20	40	240	800	30%
Suite	Music	Special Consideration		130	390		
Lab.	Accounting	2	30	460	920	2,400	38%
Lab.	Typing	3 (2)	30	340	1,550	3,600	43% (65%)
Lab.	Shorthand & Transcription	2	25	260	780	2,000	39%
Lab.	Office Machines	1	25	150	525	1,000	53%
Lab.	Data Proc.	4	25	480	2,400	4,000	60%
Lab.	Mech Tech Production Statics	3	20	280	1,160	2,400	48%
Lab.	Electronics	2	25	120	1,260	2,000	63%
Lab.	Power & Communications	2	25	140	1,440	2,000	72%
Lab.	Optics	1	25	120	690	1,000	69%
Lab.	Nursing	1 (2)	40	410	2,460	3,200	76% (77%)
Seminar	Nursing	1	15	410	410	600	68%
Lab.	Dental	2	20	140	1,020	1,600	64%
Lab.	Food	School Food Preparation Facilities					
Lab.	Police and Fire	1	30	60	450	1,200	38%
Lab.	Chem. Tech.	2	20	140	840	1,600	53%
Lab.	Const. Tech.	1	20	40	240	800	30%
Plant	Physical Educ.	(6)	(40)	4000	8000		(62.5%)

Refinement

At a preliminary stage in the preparation of Table III,[9] the consultants, the architect, and the staff of Monroe Community College made a careful analysis of the figures to determine if any changes would need to be considered before the initial space requirements estimates could be made. Several questions were raised regarding the room utilization figures, and it was generally agreed that the overall space computations for an enrollment of 4000 students were rather low. It was recognized that some of the such as large lecture halls, laboratories, etc., would probably have utilization below 60% because of the unique characteristics of the rooms and because of scheduling problems. However, it was recognized also that many of the general classrooms and seminar rooms could have utilization between 60% and 70%.

New calculations were made taking into account any anticipated scheduling problems and the specialized use that some rooms would have. The resulting changes are shown in Table III. Changes are shown in parentheses under No. 3, Number of Rooms, and No. 8, Utilization. For example, no changes were anticipated in the use of the lecture room seating 600 students which would be used for large lecture sections in English, Social Studies, Business, Nursing, etc., and the utilization figure was left at 37%. On the other hand, it was determined that tighter scheduling controls could be applied to the English seminar rooms seating 25 and that the result would be an increase in utilization from 52% to 61%. This, in turn, meant that the total number of rooms could be reduced from 20 to 17.

An additional chart,[10] was prepared by the architect which showed a summary of instructional rooms projected to an enrollment of 6000 students. These figures were highly speculative since they could not take into account possible changes in programs, courses, or instructional methods.

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[9] The consultant's report actually presented the preliminary figures in a separate table, and both the preliminary and adjusted figures in a second table. We have included only the second table as Table III.

[10] See Appendix. This table, because of its length and detail is located in the appendix. A summary of space requirements is shown later in this section in Table V.

However, they were useful figures since they gave some indication of where future expansion was likely to be required.

The next step in the campus planning study was the translation by the architect of the instructional room needs (Table III) into a tentative space plan which would show (1) the number of each type of space units required, (2) the type of space, (3) the seating capacity of the space unit, (4) the number of square feet allotted each person in the unit, (5) the total square feet for each space unit, (6) the net area, and (7) the gross area.[11] The space types were classified as follows:

1. Academic
2. Science
3. Business
4. Fine Arts - Art, Music Speech and Drama
5. Applied Arts - Career Programs
6. Health & Physical Education
7. Administration
8. Library
9. Student Center - Dining facilities, lounges, recreation facilities, etc.
10. Auditorium
11. Building Services

In developing the first space work sheets, the architect had specific information for items 1 through 6 since these areas were included in the Summary of Instructional Rooms (Table III). Tentative space estimates then were made for the remainder of the areas.

Monroe Community College operates under the supervision of the State University of New York. Under the provision of the Community College Law of New York, capital costs are shared equal by the State University and the local sponsor, Monroe County in this case. The State University has developed a set of "Standards for Determining Space Areas" which establish the amount of square feet that can be used for space units such as classrooms, seminar rooms, laboratories, offices, etc. The State University standards for determining space areas were used in computing the tentative space requirement plans.

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[11] See Appendix. This table, because of its length and detail is located in the appendix. A summary of space requirements is shown later in this section in Table V.

SUPPORT AND ADMINISTRATIVE AREAS

Before the second set of work sheets could be prepared a more accurate determination of space needs had to be made for the areas of Administration, Library, Student Center, Health and Physical Education, Auditorium, and Building Services. It was apparent also that better utilization of space would be achieved and a more orderly campus plan could be developed by grouping the various instructional areas into some kind of educational organization plan.

Administration

The first set of space estimates for the administration unit was based on the current administration organization projected to an enrollment of 4000 students. Basically, the organization consisted of a Director of Faculty Personnel Services, a Dean of Academic Programs, a Dean of Career Programs, and a Director of Student Personnel Services reporting directly to the President. Also reporting to the President was the business officer of the college, but not on the same level as the above-named deans and directors. The faculty was organized by departments. A study of the organizational plan showed that while it operated effectively at the present time, coordination problems would be encountered as the institution grew in size and as new programs and staff members were added. Dr. Good and his staff, with the aid of the consultants, began a study of the administrative structure of the college, and consideration was given to the following points:

1. That the administration of the college exists to enable the college to achieve its stated objectives.

2. That the functions of the college can be grouped into three major functional classifications: (1) academic program, (2) student personnel services, and (3) finance and business services.

3. That better coordination of faculty manpower can be achieved by the grouping of departments into a divisional organization plan.

4. That division heads should serve primarily as administrators.

5. That the college is committed to a strong student personnel services program with great emphasis on guidance and counseling. This would include a faculty adviser system backed up with specialized services provided by a trained staff.

6. That clear lines of responsibility and authority would be established.

7. That a reasonable span of control would be maintained so that each administrative officer can give adequate supervision to the divisions under his jurisdiction.

8. That provisions would be made for the use of data processing systems which would enable appropriate administrative officers to maintain fast and efficient student and business records systems.

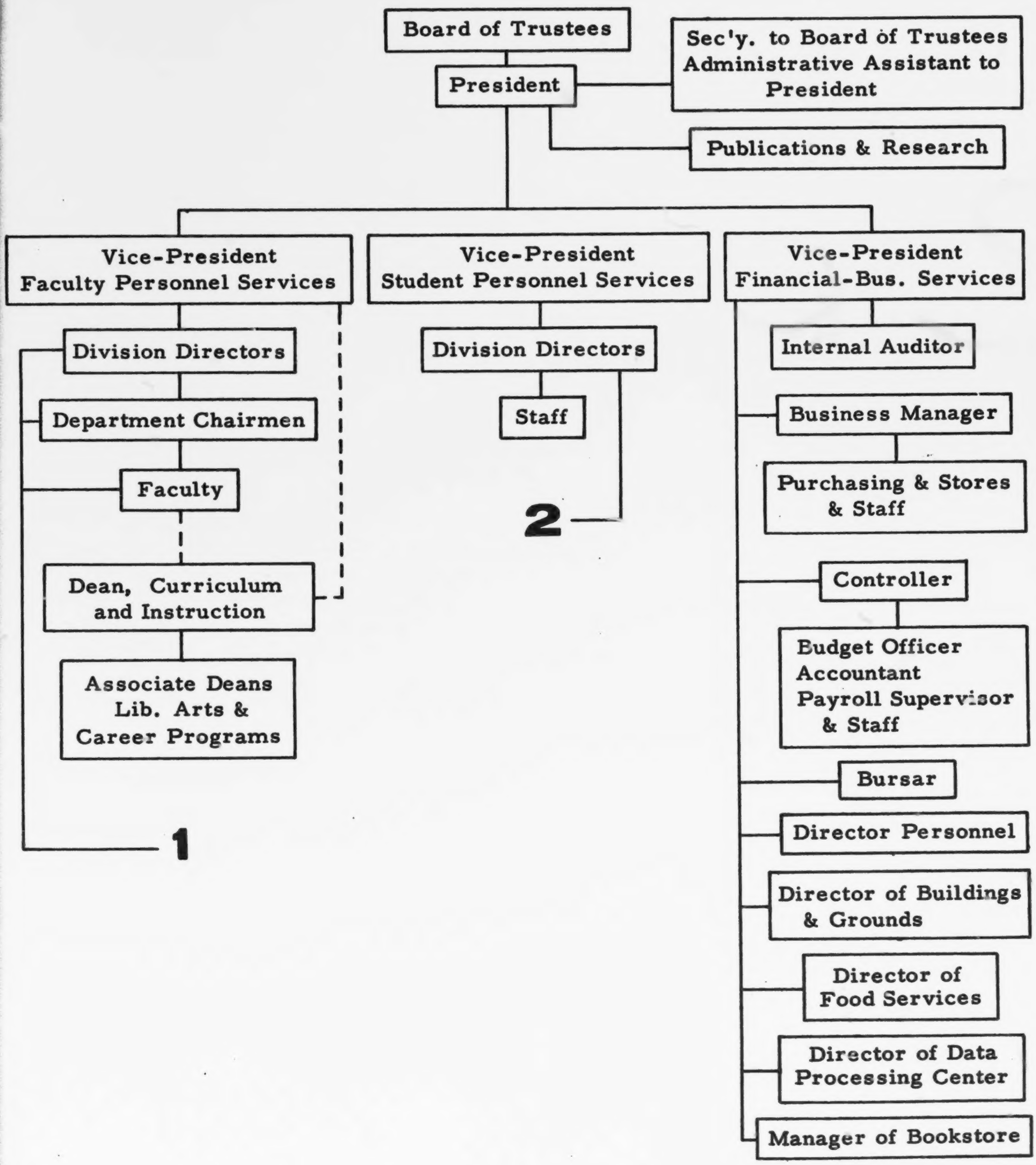
9. That provisions would be made for the establishment of an institutional research center which would provide the information necessary for good decision making and enable the institution to constantly evaluate the effectiveness of its educational program.

The Proposed Administrative Structure for Monroe Community College which follows, Table IV, was released by President Good on December 9, 1963. The new organizational structure provided the information needed for identifying specific unit space requirements to be included in the administration area. These units were identified as follows:

1. President and Board
2. Publications and Research
3. Vice-President for Faculty Services
4. Vice-President for Student Personnel Services
5. Vice-President for Financial and Business Services

TABLE IV

PROPOSED ADMINISTRATIVE STRUCTURE
MONROE COMMUNITY COLLEGE
DEVELOPMENTAL FROM 2000 - 4000 ENROLLMENT


Board of Trustees
President
Sec'y. to Board of Trustees Administrative Assistant to President
Publications & Research
Vice-President Faculty Personnel Services
Division Directors
Department Chairmen
Faculty
Dean, Curriculum and Instruction
Associate Deans Lib. Arts & Career Programs
1
Vice-President Student Personnel Services
Division Directors
Staff
2
Vice-President Financial-Bus. Services
Internal Auditor
Business Manager
Purchasing & Stores & Staff
Controller
Budget Officer Accountant Payroll Supervisor & Staff
Bursar
Director Personnel
Director of Buildings & Grounds
Director of Food Services
Director of Data Processing Center
Manager of Bookstore

1

DIVISIONS:

1. Humanities and Fine Arts
2. Sciences
3. Engineering and Mathematics
4. Service Sciences and Technologies
5. Social and Behavioural Sciences
6. Health and Physical Education
7. Business
8. Library and Instructional Services
9. Evening and Summer Sessions

DEPARTMENTS (number in parenthesis refers to Division above):

1. Business Administration (7)
2. Business Career Programs (7)
3. Data Processing (7)
4. Physical Education - Men (6)
5. Physical Education - Women (6)
6. English (1)
7. Speech and Drama (1)
8. Art (1)
9. Music (1)
10. General Education (1)
11. Modern Languages (1)
12. Chemistry (2)
13. Biology (2)
14. Physics (2)
15. Electrical (3)
16. Mechanical (3)
17. Civil (3)
18. Electronics (3)
19. Optics (3)
20. Mathematics (3)
21. Nursing, Medical & Dental (4)
22. Fire and Police (4)
23. Recreation Supervision (4)
24. Park Management (4)
25. Audio-visual and T. V. (8)

2

Divisions:

1. Testing and Counselling

2. Admissions and Registrations

3. Deans of Men and Women

4. Student Activities

5. Placement

6. Health Services

7. Student Union

8. Loans, Aids, & Scholarships

Under each of the above units were grouped the specific officers related to the functional area. For instance, under the Vice-President for Financial and Business Services there are suites for (1) the Business Manager, (2) Controller, (3) Bursar, (4) Personnel, and (5) Data Processing.

The new organizational structure also established the grouping of instructional areas into nine functional educational units or divisions: (1) Humanities and Fine Arts, (2) Sciences, (3) Engineering and Mathematics, (4) Service Sciences and Technologies, (5) Social and Behavioral Sciences, (6) Health and Physical Education, (7) Business, (8) Library and Instructional Services, and (9) Evening and Summer Sessions.

Library

Ideas about the kind of library that would be needed at Monroe Community College began to emerge at the first meeting the consultants had with President Good and his staff in July, 1963. It was obvious that the members of the group had done a lot of thinking on the subject, and these ideas were best expressed by one member of the group who said, "The old concept of the college library simply will not do." During subsequent planning sessions the following key points regarding the functions of the library were identified.

1. The library must be a dynamic place.
2. There should be an open stack arrangement so that students can circulate freely and can become familiar with the books, periodicals, and other instructional materials.
3. There should be a plentiful number of individual study stations in addition to the larger general reading rooms.
4. There should be smaller, informal study/work rooms where small groups of students can work together.
5. There should be adequate work space for faculty use.
6. The library must be technically equipped for the rapid storage and retrieval of all kinds of information.

7. The library should serve as the Audio-Visual/Television Center for the campus with provisions for viewing, storage, and production.
8. The library should serve as a center for independent study with provisions for the use of the full range of new teaching media including programmed instructions, viewing and listening devices, etc.

These ideas, and others, were then incorporated into the space study under two main headings: (1) the general library service area capable of handling approximaterly 100,000 volumes, and (2) the Instructional Resources Center.

Student Center

The Center was planned with two objectives in mind: (1) It would serve as an instructional area for the Food Technology program and would be equipped with the necessary and laboratories; and (2) It would serve the social and recreational needs of the students. Facilities included in the plans were student and faculty dining areas, kitchen, lounges, and music listening room, a quiet browsing room, recreation rooms, student government and activities offices and conference rooms, and a book store.

Health and Physical Education

Three basic ideas guided the staff in the development of space needs for the Health and Physical Education program:

1. Full participation of all students in the program.
2. A strong intra-mural sports program.
3. A limited intercollegiate athletic program.

It was determined that the facilities needed for such a program would include a gymnasium and appropriate outdoor playing fields. The gymnasium would include staff offices; lockers, showers, and dressing rooms; a training/first aid room; equipment storage and drying rooms; and the following teaching stations: (1) a main gym floor with a seating capacity of approximately 1200 which could be used for both men's and women's physical education purposes, (2) badminton, (3) handball, (4) archery, (5) fencing, (6) wrestling, (7) boxing, (8) bowling, (9) swimming, (10) gymnastics, and (11) indoor golf driving.

Auditorium

There are several large auditoriums in the city of Rochester which could be used by Monroe Community College for commencement services, special convocations, or other large group activities. The initial plans for the college also call for a little theatre with a seating capacity of approximately 600 which is a part of the Speech and Drama instructional area. For certain activities, the main gymnasium floor, with a seating capacity of approximately 1200, could be used.

Nevertheless, it was determined that at some stage in the development of the campus there should be provisions for a medium-sized auditorium with a seating capacity of approximately 2000. Such an auditorium would be included as part of the Fine Art Complex (Speech and Drama, Music, and Art) and would be equipped with full stage and orchestra. It would be used for regular college functions and as a part of the Community Services program of the college.

Building Services

Space requirements in this unit were determined as follows: offices, a receiving room, bulk supply storage, repair shops, and men's and women's dressing rooms.

The process of determining the space needs for the Monroe Community College campus involved many people at different times. The consultants met with President Good and the members of his administrative staff on numerous occasions. The staff and various faculty members of the college worked on specific problems as they were identified. Officials of the State University of New York and the New York State Education Department were consulted. The architect was consulted as changes were made, and he prepared new work sheets. The results of this joint planning are shown in Table V, Summary of Space Requirements by Functional Units.

Table V Summary of Space Requirements by Functional Units

4000 Enrollment	Net Area	Gross Area
Unit "A"		
Business Division	17,680	
Humanities Division	18,900	
Soc. & Behav. Sci. Division	10,360	
Joint Instructional Space	12,000	
Coat Room	1,000	
Total - Unit "A"	59,940	89,500
Unit "B"		
Fine Arts Complex	20,372	30,450
Unit "C"		
Sciences Division	37,700	
Math. & Engr. Tech. Divn.	41,670	
Service Sci. & Tech. Divn.	15,930	
Joint Instructional Space	5,314	
Coat Room	1,000	
Total - Unit "C"	101,614	151,700
Health & Physical Education	78,870	108,400
Student Center	50,410	72,000
Library & Instructional Resources Center	65,465	87,130
Building Services	8,450	10,560
Administration	19,849	39,698
TOTAL	401,970	589,438

See Appendix for detailed breakdown of space requirements.

SUMMARY

The planning of facilities for an institution as complex as a community college, which offers a variety of educational programs and includes many supporting services, requires the efforts of many people and agencies. This report reviews the steps that were taken in the development of the educational specifications for planning the Monroe Community College.

The preparation of the educational specifications is a key activity in the whole planning process. But, it is not the final step. The specifications, in a sense, represent a policy statement for the college; they reflect the philosophy of the college with respect to the kind of educational services that are to be made available to the students, and they translate the philosophy into tentative space layout plans.

Before the architects can proceed with detailed studies of the individual units and buildings, more detailed information must be provided with respect to the actual functions that are to take place in each space unit and the special facilities that are required. What is actually going to happen in each classroom, laboratory, etc.? What media of instruction will be used? What procedures will be used in admitting and registering students? What physical relationships should exist between division and faculty offices? What will be the flow of work in the business offices? These and many other questions need to be answered.

At this stage the total faculty of the college must become deeply involved in the planning process, for the faculty members are the ones who can answer many of the questions about room utilization. On December 7, 1963, the consultants met with the faculty of Monroe Community College to (1) review the entire process of campus planning, (2) review the educational specifications that had been prepared, (3) interpret the assumptions that had been used in preparing the specifications, and (4) give instructions for the preparation of the more detailed space studies. In preparing for this general faculty meeting, the consultants met with the administrative staff and eleven faculty group discussion leaders, at which time the plan for faculty involvement was discussed.

Following the general session, the faculty was divided into representative discussion/work groups according to program and subject fields. Each group was given the responsibility of reviewing the tentative space allotments for each division, recommending any possible changes in the use of the space, and describing in detail how each space unit is to be used. As part of this process, each course now offered, or contemplated, was to be reviewed according to (1) course purpose, (2) course content, (3) prerequisites, (4) instructional methods and media used, and (5) facilities required. These discussion groups have continued this work and preliminary reports are to be ready in February 1964.

ANALYSIS

PROGRAM IMPLICATIONS

Functional Relationships

The accompanying diagram illustrates the desired relationships among the major academic groupings and support facilities. The three major academic groups, Units "A", "B", and "C" combine disciplines with close affinities, and which also tend to lend themselves as nearly as possible to appropriate building types. These groups have been combined as follows:

Unit "A" - Humanities, social and behavioral sciences, and business.

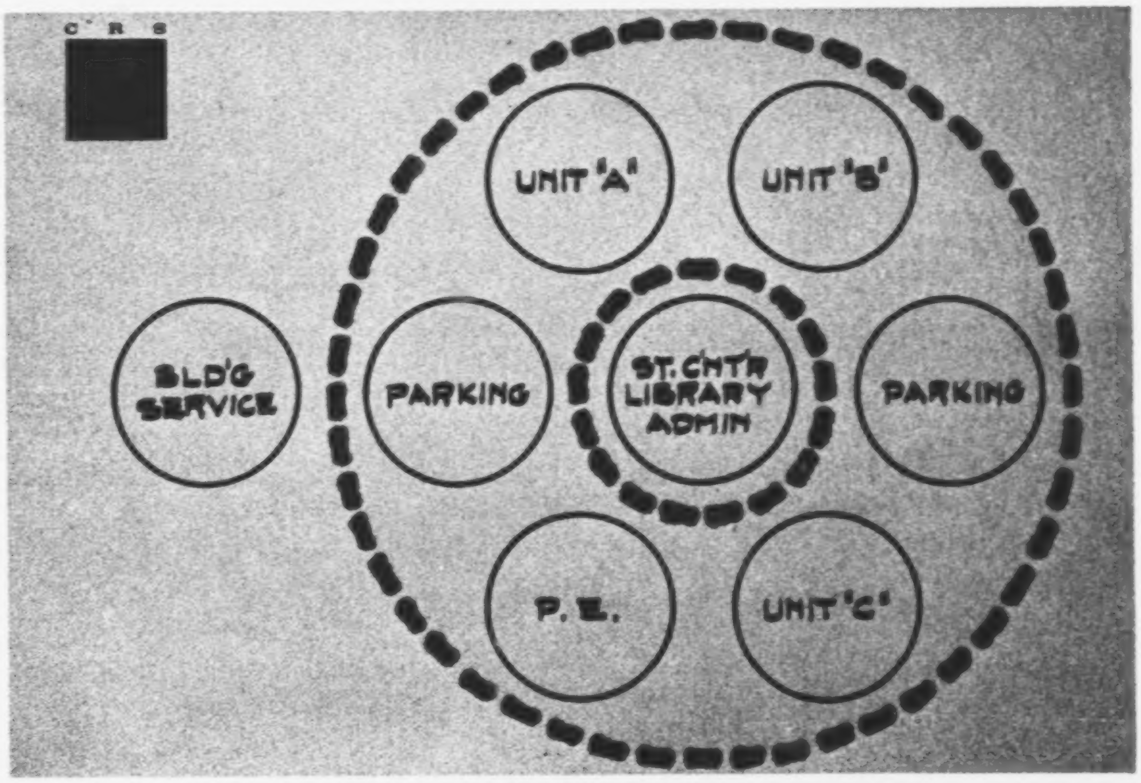
Unit "B" - Fine arts and auditorium.

Unit "C" - Science, service sciences and technologies, and mathematics and engineering technology.

These units, along with the health and physical education unit, should in turn relate as closely as possible to a central activities core comprised of student center, library, and administration building.

A large parking requirement, necessitated by the commuter characteristic of the college is an important element of the plan and should relate as closely as possible to all units as well as the activities core.

Building service needs only convenient access to campus circulation and no particularly close relationship with other buildings.



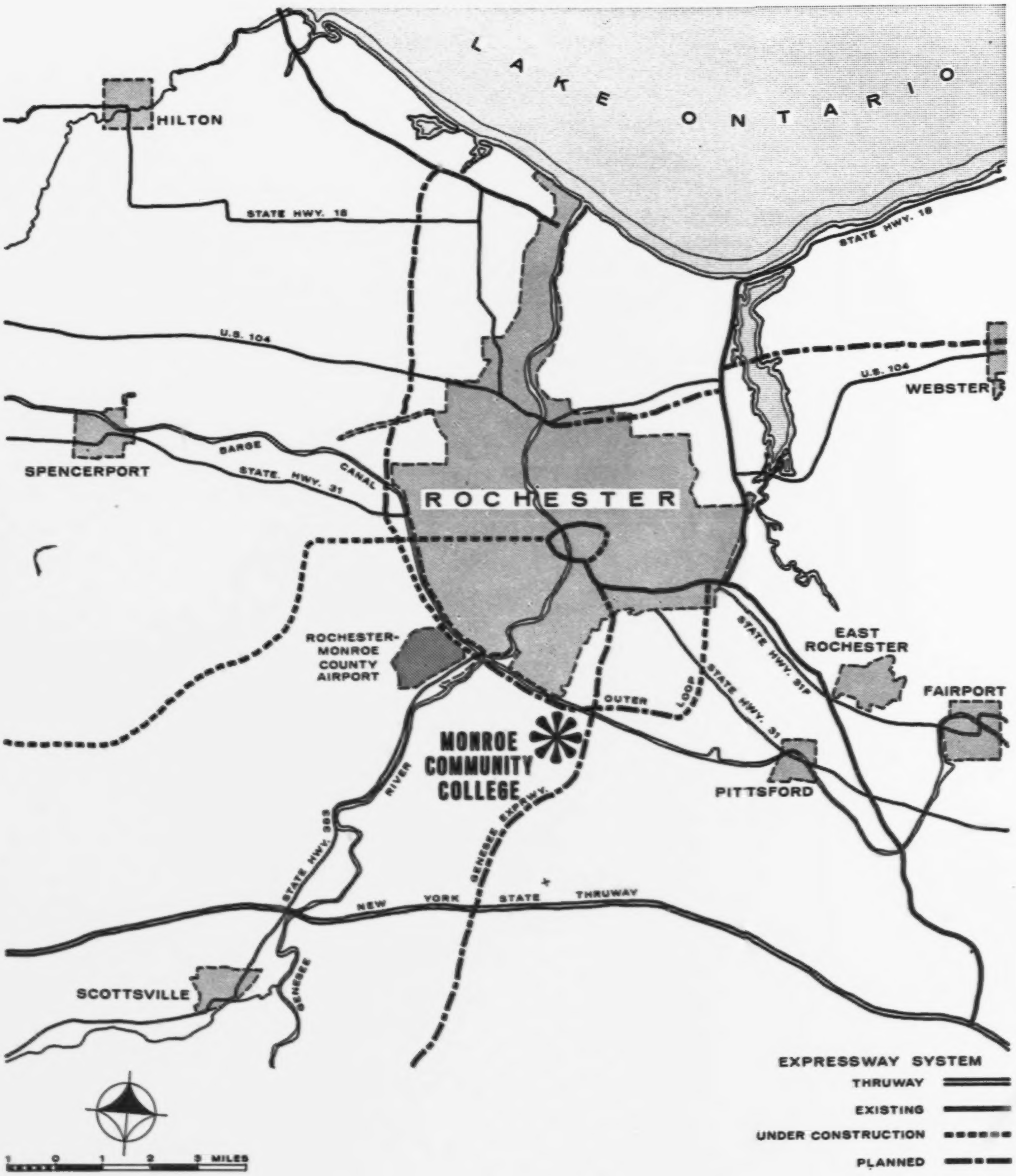
THE SITE

Size and Location

The site selected for the new Monroe Community College contains approximately 360 acres and is located just south of the City of Rochester in Brighton Township. It is bounded on the north by the barge canal and proposed Outer Loop Expressway, on the east by Clinton Avenue south and proposed Genesee Expressway, on the south by Brighton-Henrietta Town Line Road, and on the west by East Henrietta Road.

The Outer Loop and Genesee Expressway will be constructed partly on the perimeter of the north and east sides of the site. When these expressways become a reality, the remaining college site will approximate 300 acres.

The general character of the site is most appealing with good views to the site from all directions. Although views of surrounding areas from the site are restricted by high topography and existing woods, these woods and meadows result in very pleasant views within the site.


LAKE ONTARIO
HILTON
STATE HWY. 18
STATE HWY. 18
U.S. 104
U.S. 104
WEBSTER
SPENCERPORT
BARGE CANAL
STATE. HWY. 31
ROCHESTER
ROCHESTER-MONROE COUNTY AIRPORT
EAST ROCHESTER
STATE HWY. 31F
FAIRPORT
OUTER LOOP
STATE HWY. 31
MONROE COMMUNITY COLLEGE
PITTSFORD
RIVER
GENESEE EXPRWY.
STATE HWY. 383
NEW YORK STATE THRUWAY
SCOTTSVILLE
GENESEE
EXPRESSWAY SYSTEM
THRUWAY
EXISTING
UNDER CONSTRUCTION
PLANNED
1 0 1 2 3 MILES

Topography

The site is highest on its west side along East Henrietta Road and slopes gently eastward to Low Meadows which lie about 35 feet below the elevation of East Henrietta Road. These meadows cover approximately the eastern half of the site except for a knoll in the northeast corner of the site and a gently rise at the intersection of Town Line Road and Clinton Avenue south in the southeast corner.

Nowhere is the topography so steep as to make the development of the campus difficult.

Soils

The site generally contains three types of surface soils as shown on the accompanying diagram. Numbers 2 and 3 are similar in type but are distinguished by existing drainage characteristics and location on the site, Number 3 being poorly drained.

Soil Type No. 1 possesses the highest bearing capacity and degree of stability and is highly suitable for building construction.

Although Soil Type No. 2 has a lower bearing capacity than No. 1, it is still suitable for building construction and other phases of campus development.

Soil Type No. 3 is least suitable for building construction and therefore can be used to the greatest advantage for play fields and recreation.

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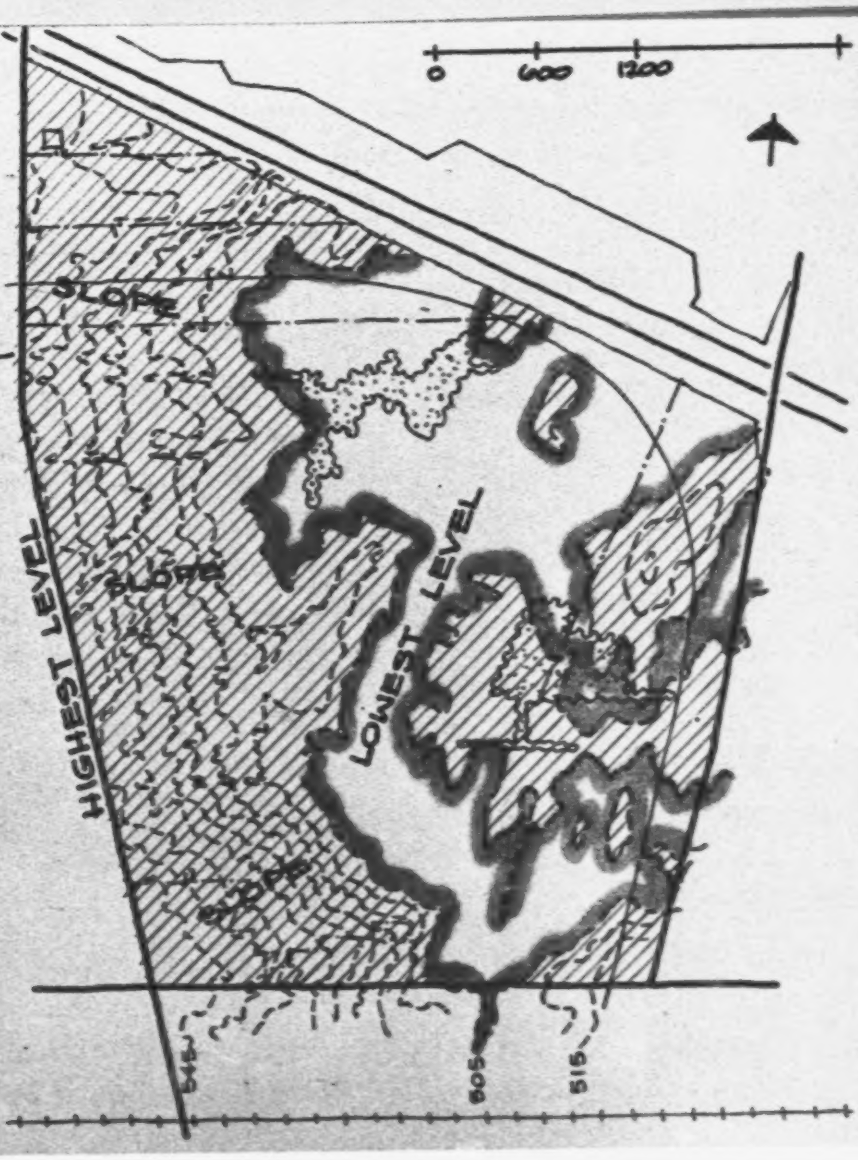
TOPOGRAPHY

5' CONTOUR INTERVAL


0
600
1200
SLOPE
SLOPE
SLOPE
HIGHEST LEVEL
LOWEST LEVEL
545
505
515

MONROE COLLEGE

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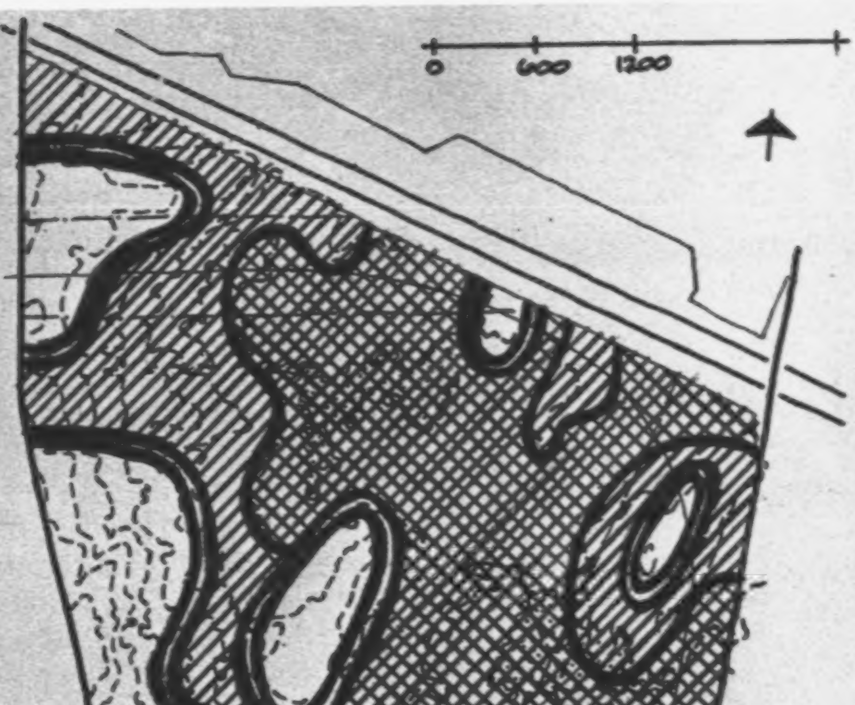
SOILS ANALYSIS

1 ▢ COMPACT TILL - WELL DRAINED

2 ▨ SILTY CLAY LOAM - MODERATELY WELL DRAINED

3 ▦ SILTY CLAY LOAM - POORLY DRAINED



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Drainage

The western half of the site being situated on the highest topography is well drained, as is the area of the knoll in the northeast corner of the site.

Two drainage ditches traverse the site from west to east. Both ditches drain under Clinton Avenue south one adjacent to the barge canal and one at about the mid point of the eastern side of the site.

The central portion of the site is relatively flat and will require some improvement in its drainage in some areas.

Cover

There are two principal groves of trees on the site situated in the low areas and consisting mainly of maples with some elms and oaks. Other portions of the low areas are covered mostly with meadow grasses.

Large areas of bare soil exist in the vicinity of the animal brood houses which are at present located in the central part of the site. Other portions of the higher part of the site are under cultivation with recent vegetable and grain crops in evidence.

A few farm buildings occupy a small area in the central portion of the site. Several private residences are situated along Town Line Road; and, a few along East Henrietta Road separate the site from the intersection of these two roads at its southwest corner.

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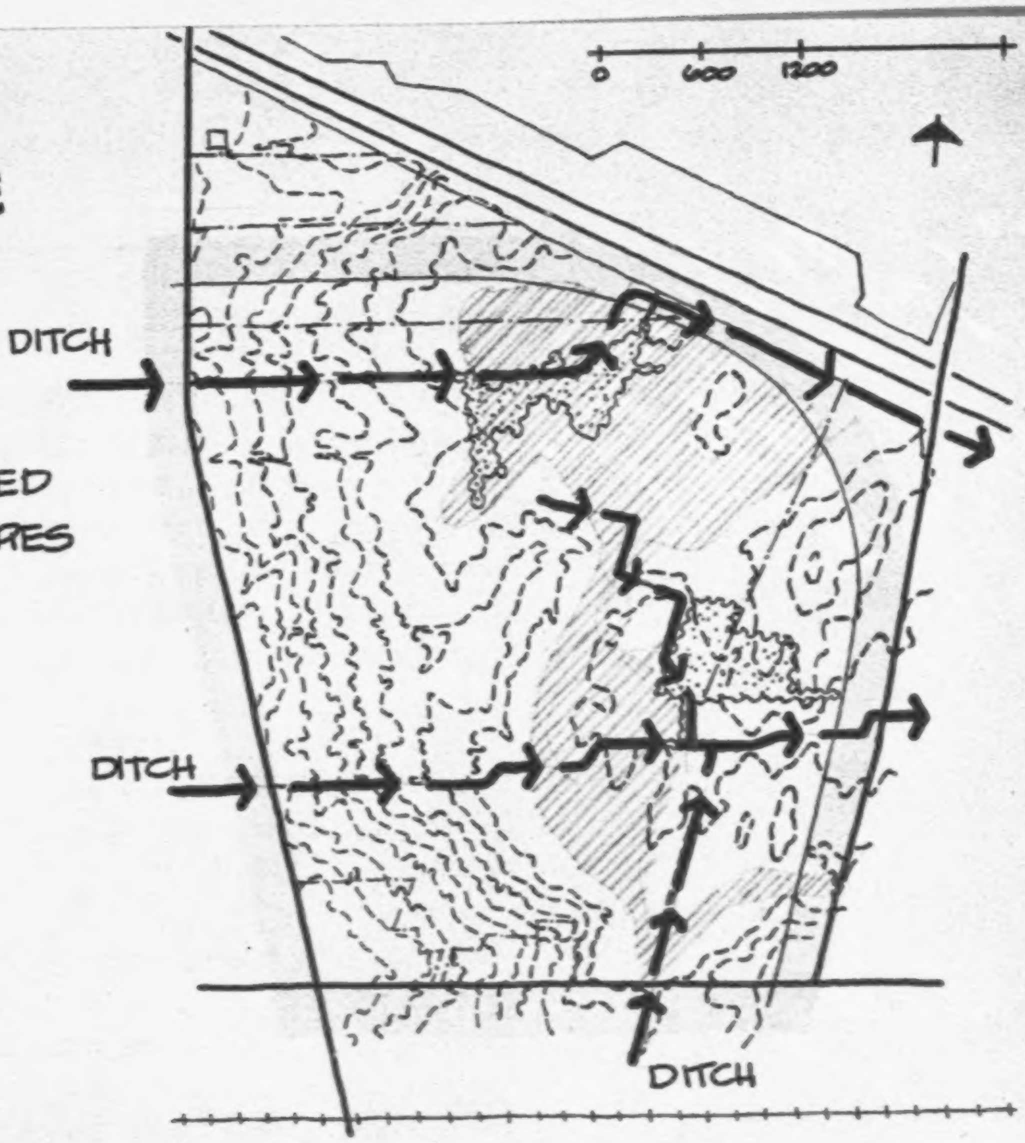
DRAINAGE

▨ MARSHY OR POORLY DRAINED APPROX. 80 ACRES


0
600
1200
DITCH
DITCH
DITCH

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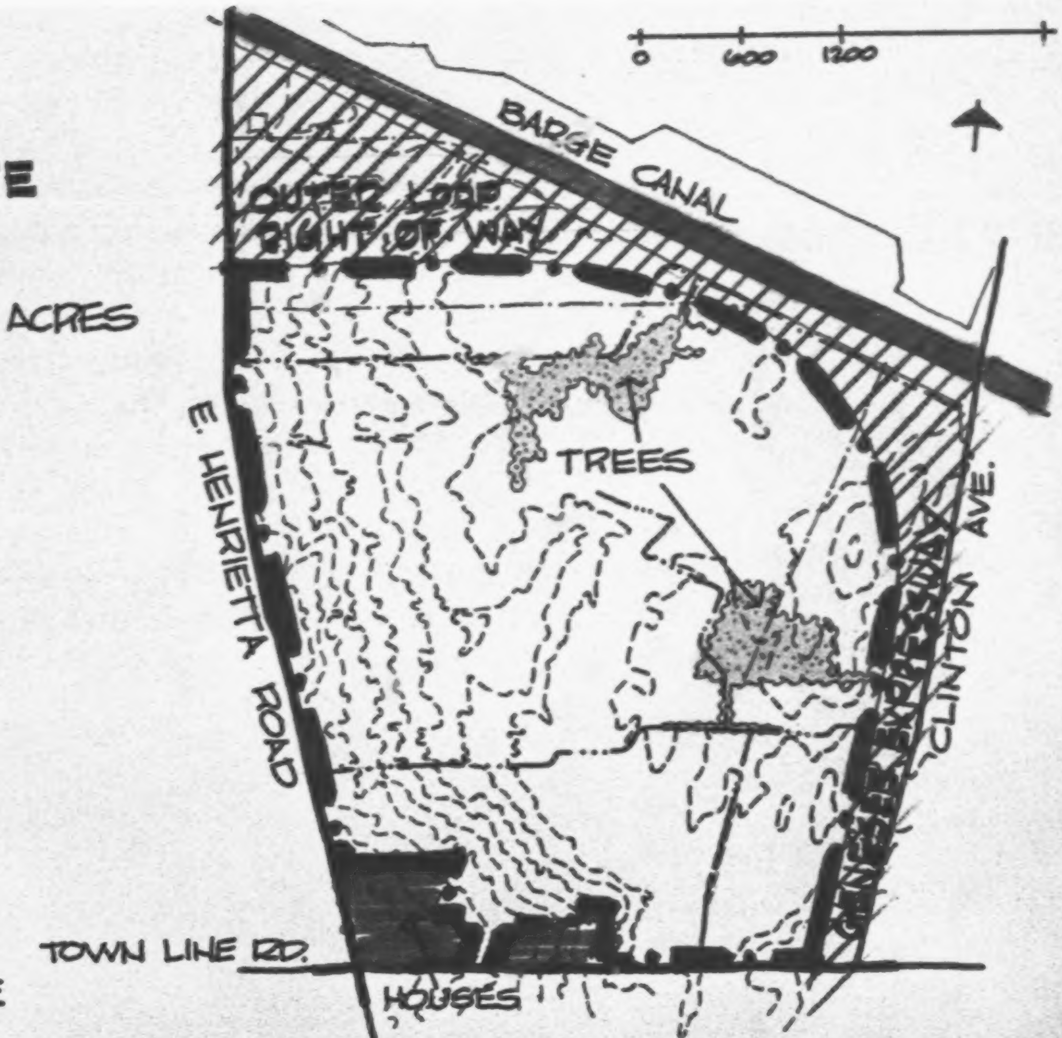
THE SITE

AREA: APPROX. 300 ACRES


0
600
1200
BARGE CANAL
OUTER LOOP RIGHT OF WAY
TREES
E. HENRIETTA ROAD
GENESEE EXPRESSWAY
CLINTON AVE.
TOWN LINE RD.
HOUSES

MONROE COLLEGE

Land Use

The north side of the site is bounded by the barge canal beyond which lies a large group of public facilities including hospitals, sanitarium, park and the University of Rochester. Land to the east, south, and west is zoned residential except the north half of the west side which is presently zoned commercial on both sides of East Henrietta Road.

The proposed expressways will negate effects of land uses to the north and east. Property to the east is expected to develop into medium cost single family residential.

Property to the south and west now contains scattered rural residential. Although it is zoned single family, the land to the south which is shallow and backs up to the railroad might also be suitable for apartments or even light industrial park development. Such a trend is already evident farther south and west of the site.

The future of the commercial zone along East Henrietta Road is in doubt since much of it lies on property owned by the County Prison Farm which is to be relocated.

Utilities

All utilities are available immediately adjacent to the site except sanitary sewer.

The site is served by Brighton Sewer District No. 2. Other mains are closer but are situated on high terrain and are located in other sewer districts.

Abundant water is present in main conduits in Clinton Avenue adjacent to the site. Electric power is available from an existing sub-station near the northwest corner of the site. With some improvement in existing facilities, steam can be made available at the existing Iola Plant just beyond the barge canal. Gas is available in East Henrietta Road.

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LAND USE

▨ ZONED FOR BUSINESS COULD DEVELOP AS COLLEGE-ORIENTED RETAIL & SERVICES

■ PROPOSED EXPRESSWAYS

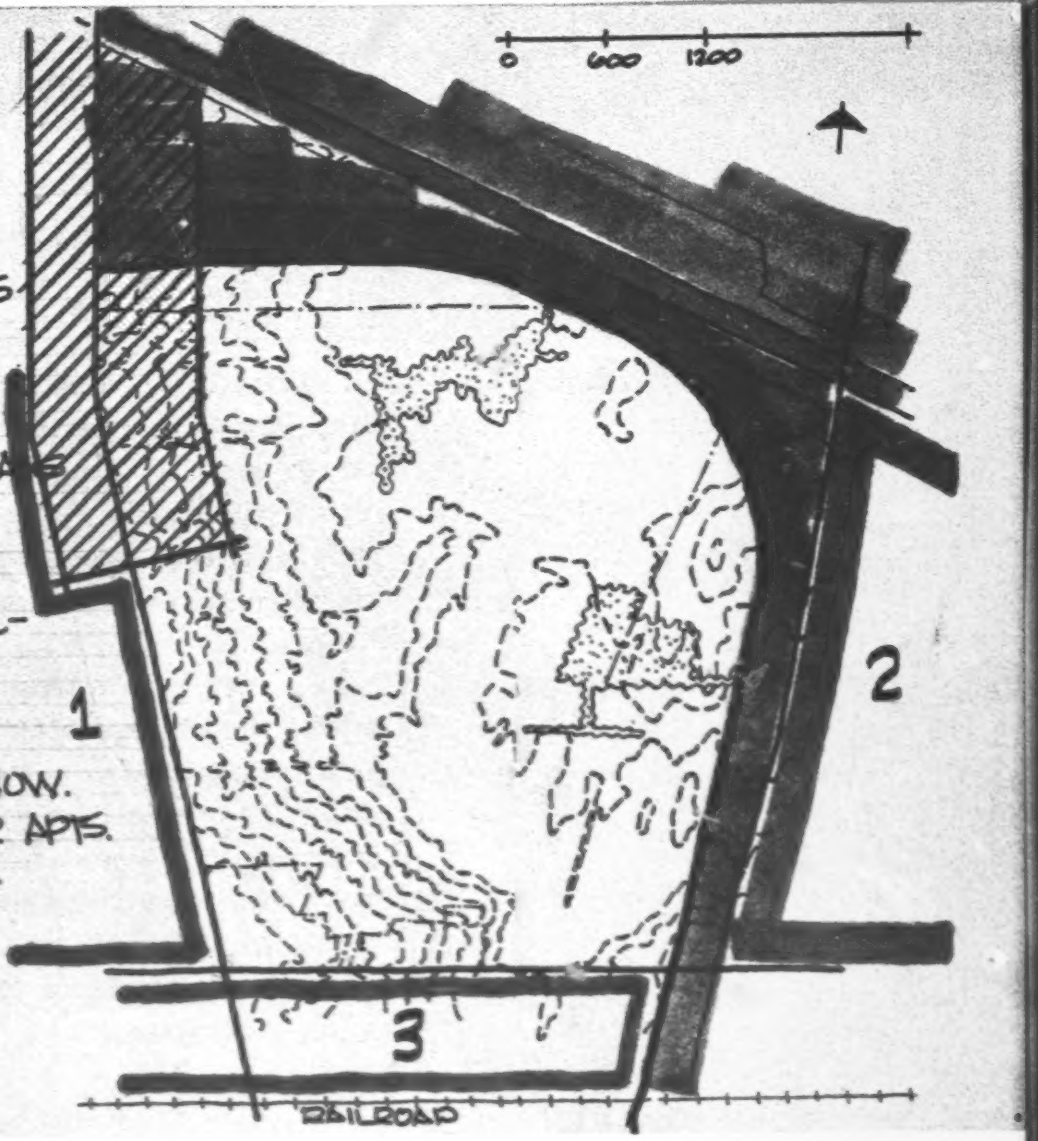
▭ RESIDENTIAL AREAS

1 RURAL RESIDENTIAL - NOW SCATTERED.

2 SCATTERED NOW.

3 SCATTERED RURAL NOW. ALSO SUITABLE FOR APTS. OR LIGHT INDUSTRY.

MONROE COLLEGE


0
600
1200
1
2
3
RAILROAD

C R S

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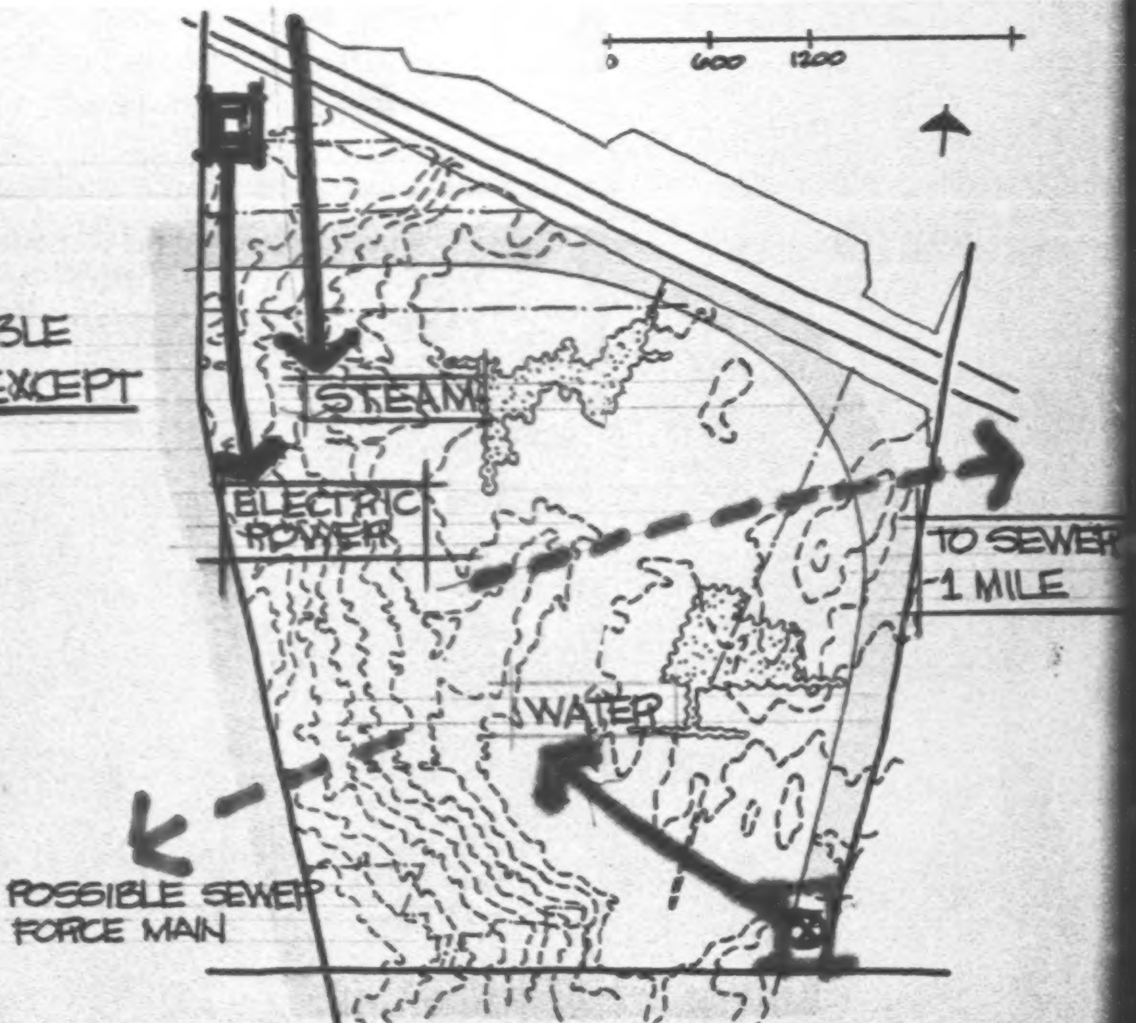
UTILITIES

ALL UTILITIES AVAILABLE ADJACENT TO SITE, EXCEPT SANITARY SEWER

MONROE COLLEGE


0
600
1200
STEAM
ELECTRIC POWER
TO SEWER 1 MILE
WATER
POSSIBLE SEWER FORCE MAIN

Access

Principal access to the site will be from East Henrietta Road on the west and from Town Line Road on the south side of the site. Under present highway department plans, there is no direct access from the expressway system to either the site or to Town Line Road. Most expressway traffic would gain access to East Henrietta Road via service lanes, and then make left turns into the campus. The relief for this congestion would be to exit from the Genesee Expressway at a point south of the railroad or at some even more remote point and enter the campus via Town Line Road. It is our recommendation that serious consideration be given to providing exit ramps on the north and/or east sides of the campus. These could provide direct access to Town Line Road and then to the south entrance to the campus.

Traffic Generation

It is estimated that 50% of college traffic will be generated on the Outer Loop, 30% on the Genesee Expressway, mostly from the north, and 20% on East Henrietta and Town Line Roads.

Assuming no direct access from the expressways, all college bound traffic on the expressways must eventually interchange to East Henrietta and Town Line Roads and enter the college from the west and south.

Several entrance intersections will need to be provided in order to handle this concentration of traffic with lights and channelization at each to facilitate all necessary turning movements.

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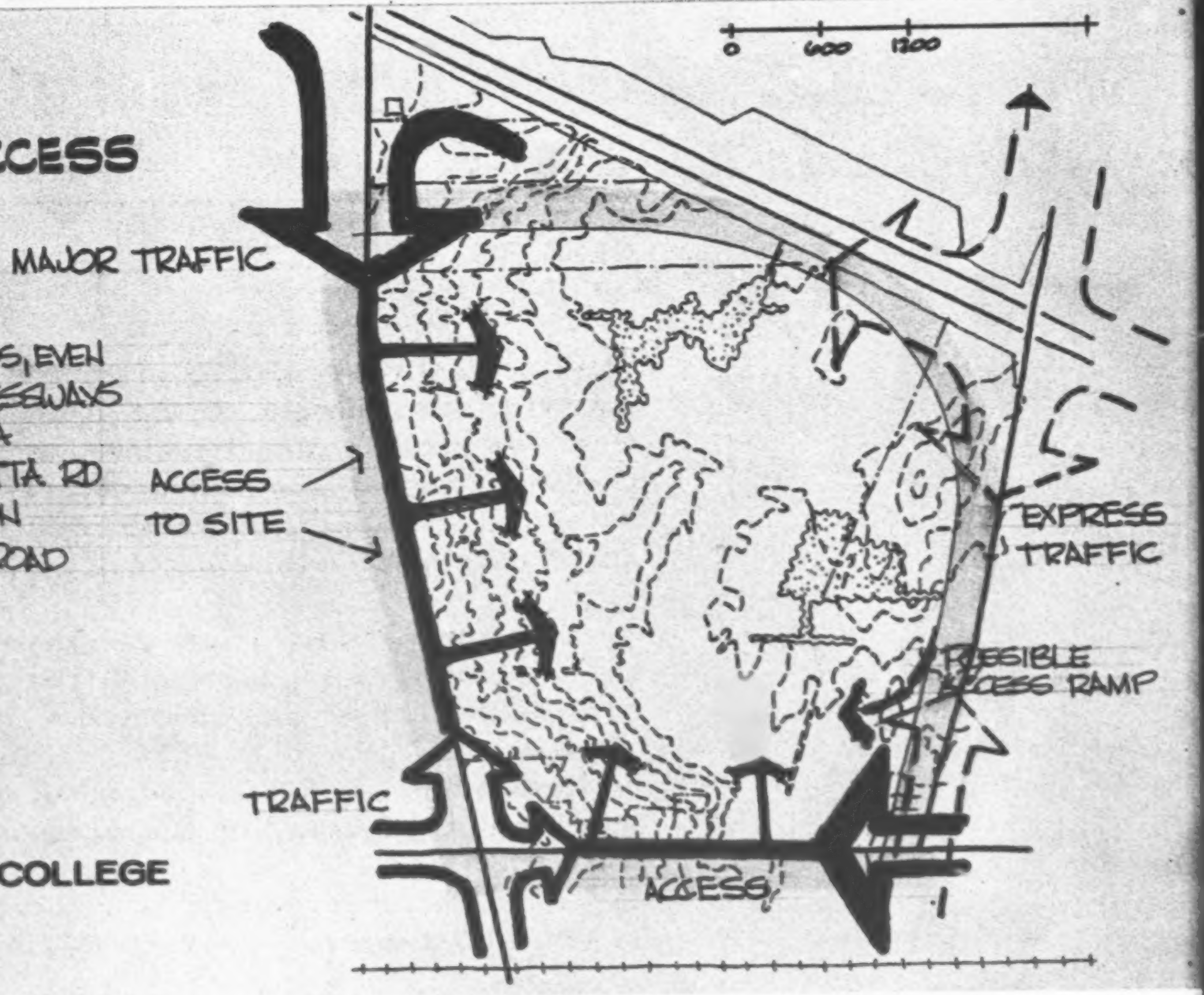
ACCESS

MOST ACCESS, EVEN FROM EXPRESSWAYS WILL BE VIA EAST HENRIETTA RD AND BRIGHTON TOWN LINE ROAD


0
600
1200
MAJOR TRAFFIC
ACCESS TO SITE
EXPRESS TRAFFIC
POSSIBLE ACCESS RAMP
TRAFFIC
ACCESS

MONROE COLLEGE

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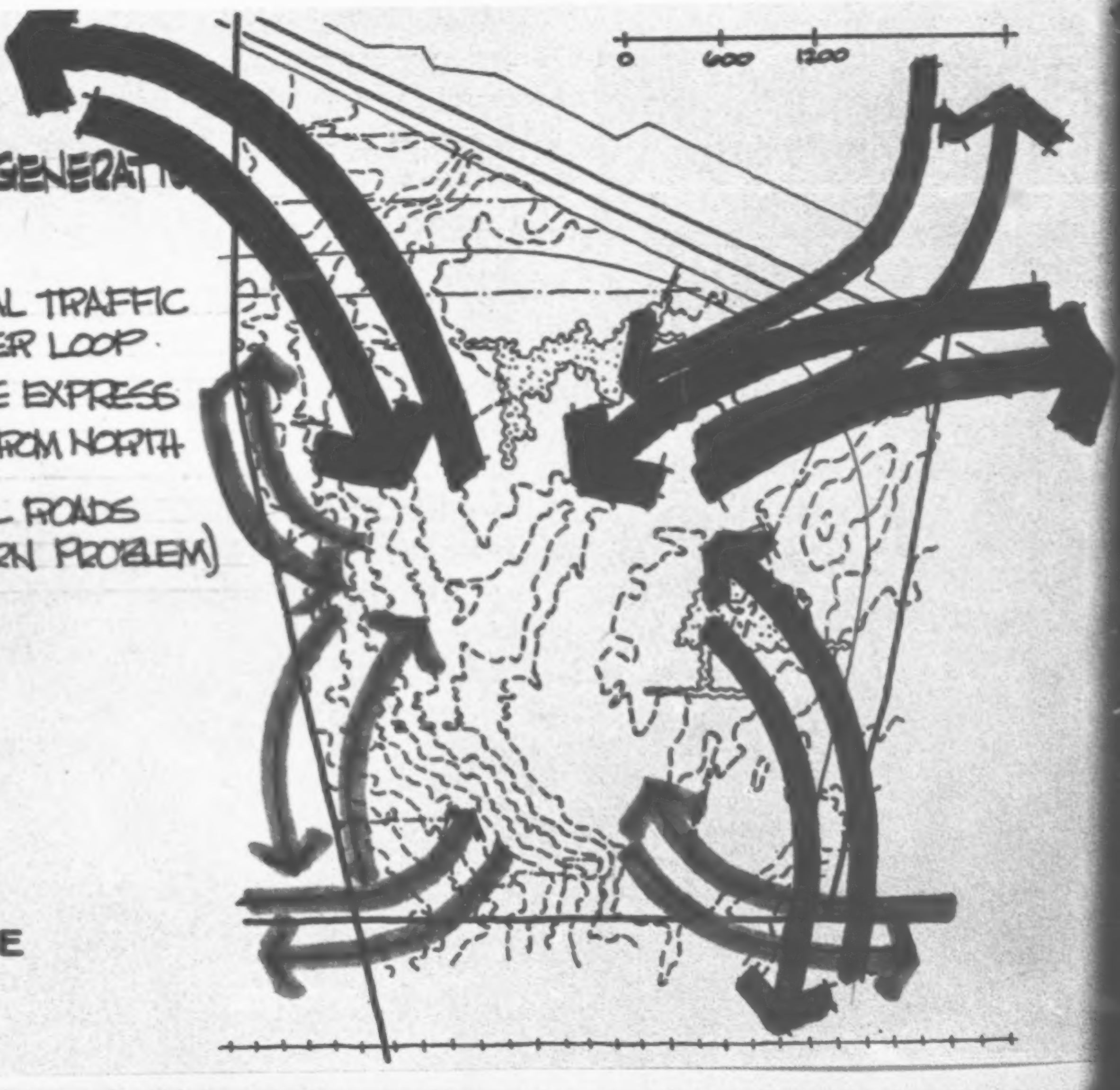
TRAFFIC GENERAT

■ 50% PRINCIPAL TRAFFIC ON OUTER LOOP

■ 30% GENESEE EXPRESS MAINLY FROM NORTH

■ 20% ARTERIAL ROADS (LEFT TURN PROBLEM)



MONROE COLLEGE

CLIMATE

The accompanying charts provide a means of summarizing the climate of the Rochester area. The first two charts titled "Temperature" and "Heating-Cooling" together show all necessary information regarding actual temperatures, design temperatures, and cloud cover.

Temperature

Temperatures titled "Normal" constitute daily extremes averaged for one month periods. The shaded area between these daily extremes indicates an average daily variation of about 20°. Normal annual range is from 83° to 16°. Beyond these normal averages there are only 9 days with a maximum of 90° and above, while there are 133 days with a minimum below freezing. Design temperatures, therefore, range from 95° to -5°. Maximum range on record is from 102° to -22°.

The shaded numerals call attention to the predominant number of days in each month for temperature or cloud cover classifications. A predominance of cloudy days during autumn, winter, and spring coupled with low temperatures suggests that the Rochester area experiences a generally cold "grey" type of climate. Its proximity to the Great Lakes produces a certain modulating effect compared to areas farther inland from the lakes, but not to such extent as to alter the importance of designing buildings to meet the winter extremes.

Precipitation

The precipitation chart indicates an annual accumulation of 31.74 inches well distributed through the year. Unusually heavy downpours seem to be rare.

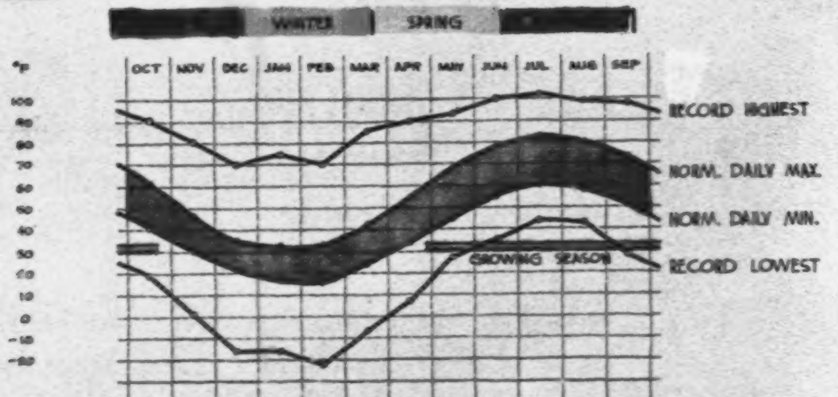
Snow-Sleet

The normal annual snowfall is 75.2 inches occurring mostly from December to March with its peak in January and February. Heavy storms approaching as much as 30 inches in one day occur occasionally.

C R S

CLIMATE

TEMPERATURE

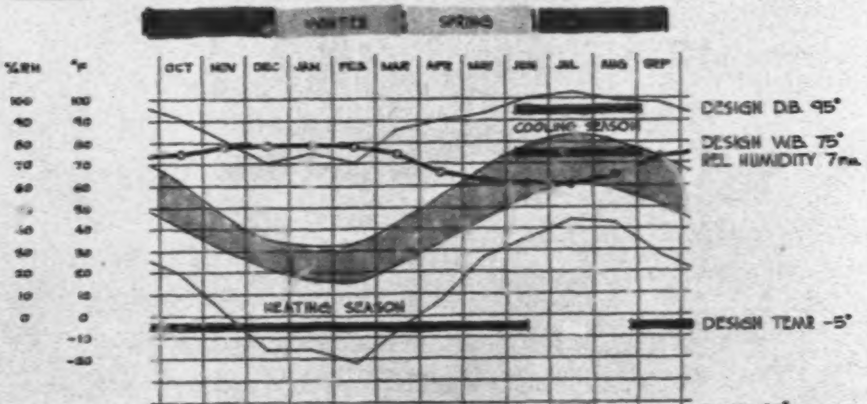


	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
CLEAR DAYS	8	5	2	2	5	6	8	9	10	11	11	10
PTLY. CLOUDY DAYS	9	7	6	8	8	9	9	11	11	[illegible]	[illegible]	10
CLOUDY DAYS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	7	8	10

C R S

CLIMATE

HEATING - COOLING

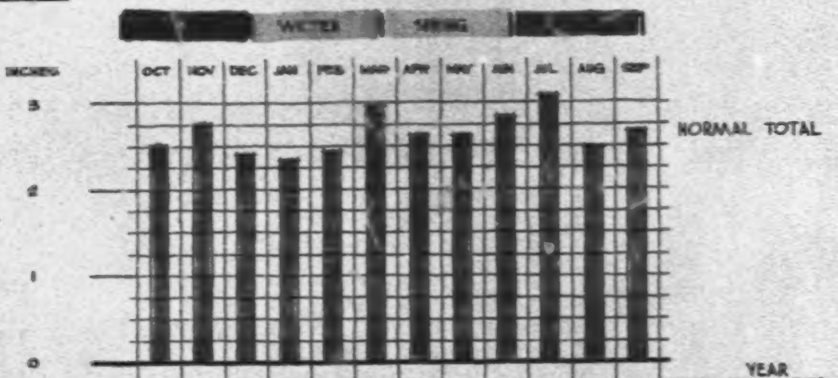


	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
DAYS 90°+	0	0	0	0	0	0	0	1	5	[illegible]	2	1
DAYS 32°-	9	19	[illegible]	[illegible]	[illegible]	[illegible]	10	1	0	0	0	1
NORM. DEG. DAYS	440	759	1161	1344	1148	992	605	279	84	9	64	198

C R S

CLIMATE

PRECIPITATION

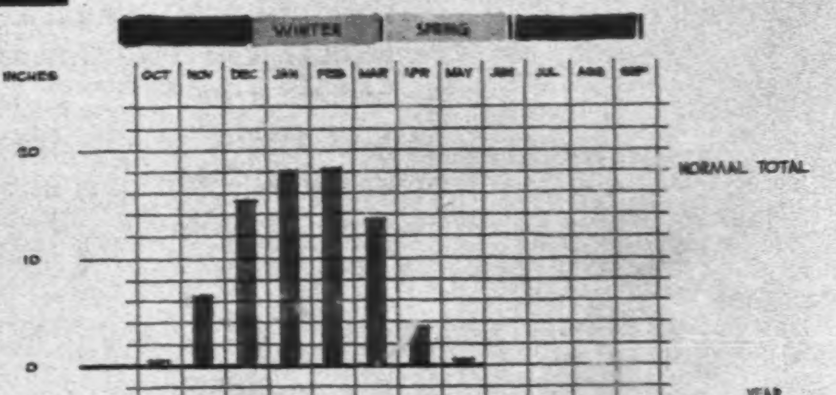


	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	YEAR
NORMAL TOTAL	2.60	2.76	2.40	2.36	2.42	2.96	2.64	2.64	2.85	[illegible]	2.48	2.66	[illegible]
MAX. MONTHLY	8.67	7.12	6.17	8.05	5.40	7.02	6.13	6.87	8.57	[illegible]	7.20	7.41	[illegible]
MIN. MONTHLY	[illegible]	.33	.46	.11	.01	.90	.80	.36	.75	.95	.96	.46	[illegible]
MAX. IN 24 HRS.	3.77	3.16	2.20	2.11	2.43	2.98	1.49	1.75	3.86	3.87	[illegible]	2.47	[illegible]

C R S

CLIMATE

SNOW - SLEET



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	YEAR
NORMAL TOTAL	0.5	6.4	15.6	[illegible]	[illegible]	13.8	3.8	0.6	0	0	0	T	[illegible]
MAX. MONTHLY	6.1	22.2	41.8	30.4	42.7	[illegible]	25.1	3.5	0	0	0	T	[illegible]
MAX. IN 24 HRS.	9.8	16.8	17.8	17.1	16.6	[illegible]	10.0	3.0	0	0	0	T	[illegible]

γ

Wind Probably the most unique factor in the climate is the invariable direction of the prevailing winds, particularly during the winter. The cold winds seems to blow from WSW virtually all of the time.

Since wind is the most disagreeable climatic factor in winter, a definite prevailing direction makes the use of windbreaks feasible in creating calm micro-climates in the area. This principle is illustrated by the second diagram on the opposite page.

Sun The last two diagrams illustrate sun angles relative to a building oriented for wind protection as shown in the second diagram. Hours are solar time in these diagrams. Summer hours must be shifted one hour to coincide with daylight saving time. Summer information is for June 21, winter information is for December 21.

The first diagram shows bearing angles in plan as well as the length of day. Because of its location at 43° 07' north latitude, Rochester experiences considerable difference in length of day from summer to winter. Between sunrise and sunset there are about 8-1/2 hours on December 21 and about 15-1/2 hours on June 21. The short winter days also add to the "grey" character of the climate.

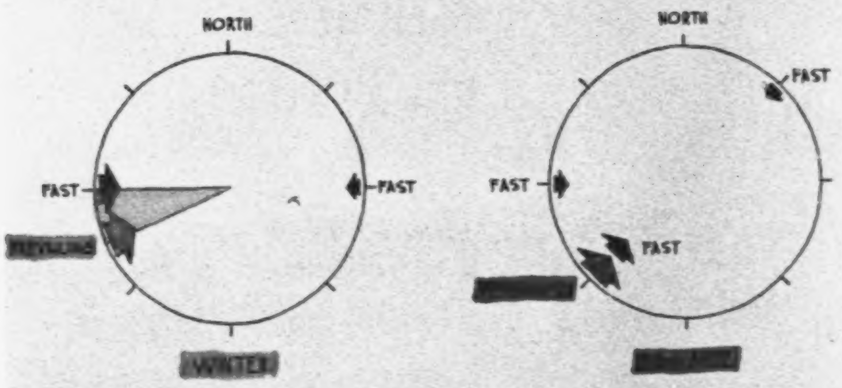
The last diagram shows profile angles in cross section. These angles, along with many other necessary angles not included in this brief summary, become significant relative to heat gain and glare control when final designs for specific buildings are being conceived.

Conclusion Although the Great Lakes exert a slight modulating influence on the climate, it should be considered essentially cold and "grey." The most disagreeable factors in winter are low temperatures, cold westerly winds, abundant snowfall, short periods of daylight and sunshine, and a predominance of cloudy sky. Efforts to offset these factors should be paramount among design considerations.

C R S

CLIMATE

WIND


NORTH
FAST
FAST
PREVAILING
WINTER
NORTH
FAST
FAST
FAST

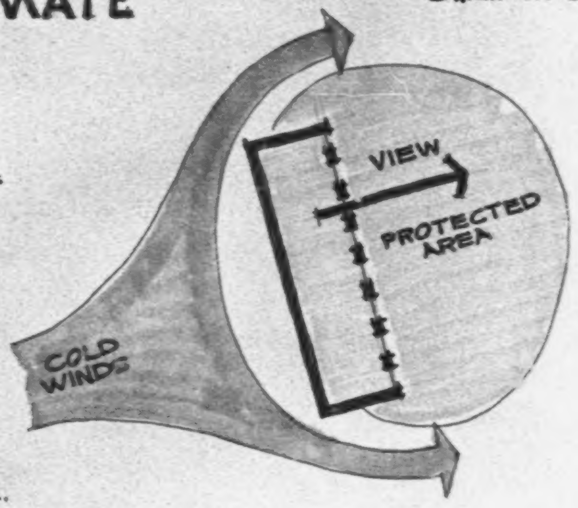
C R S

LOZIER

CLIMATE

ORIENTATION

SHALLOW BUILDING
ORIENTED FOR
WIND PROTECTION.
FEWEST OPENINGS
TO SOUTH-WEST,
PRINCIPAL VIEW
TO NORTH-EAST.
(115° E.)

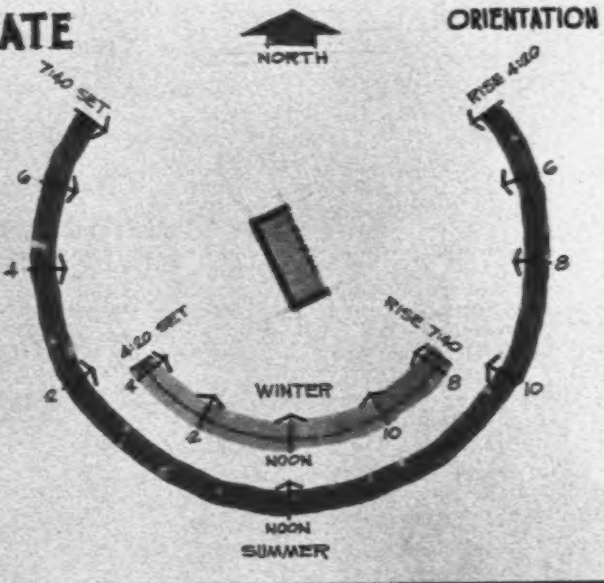

VIEW
PROTECTED AREA
COLD WINDS

THIS ORIENTATION
ALSO WORKS WELL
FOR SUN CONTROL.

C R S

CLIMATE

ORIENTATION


NORTH
7:40 SET
RISE 4:20
6
6
4
8
4:20 SET
RISE 7:40
2
4
8
10
WINTER
2
10
NOON
NOON
SUMMER

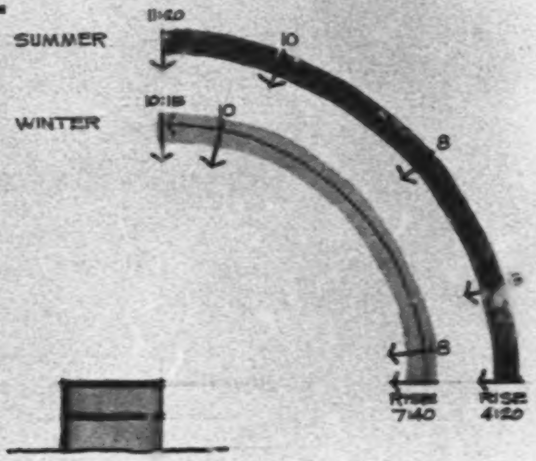
SUN BEARINGS

NORTH-EAST
ORIENTATION
(115° W.)

C R S

CLIMATE

ORIENTATION


SUMMER
11:20
10
WINTER
10:15
10
8
6
8
RISE 7:40
RISE 4:20

PROFILE ANGLES

NORTH-EAST
ORIENTATION
(115° W.)

UTILIZATION

Scale

The first diagram is a rough indication of the size of the proposed college development relative to the site simply to illustrate the scale of the project.

The building mass is shown as if all buildings were one story high and all contained under one roof. The parking area is for 4,000 cars as if in one massive lot. The physical education area is as if all facilities were adjacent to each other.

Buildable Areas

The second diagram is a preliminary indication of the general areas of the site most suitable for various types of development. This study, although based primarily on topography and drainage, closely resembles and coordinates with the soils analysis.

Drainage

The last diagram illustrates an approach to improving the drainage in the low area of the site. A considerable area would be excavated to serve both as a borrow pit for acquiring fill to reclaim other areas as well as a holding basin to receive and hold drainage water and to modulate its outflow from the basin. It should be pointed out that these and some of the following analysis diagrams were conceived during the early preliminary phase of this plan. They are included in the report only to express a concept or an idea and may not coincide exactly with the final recommended plan. The final plan, however, will reflect a considered refinement of most of these ideas and concepts.

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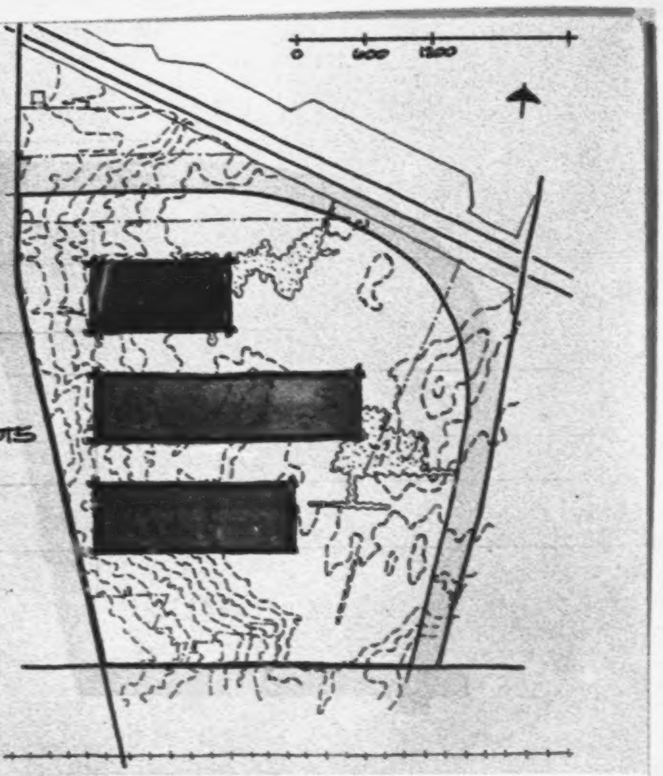
SITE SCALE

BUILDINGS AT 1 STORY

PARKING IN SURFACE LOTS

PHYSICAL EDUCATION



MONROE COLLEGE

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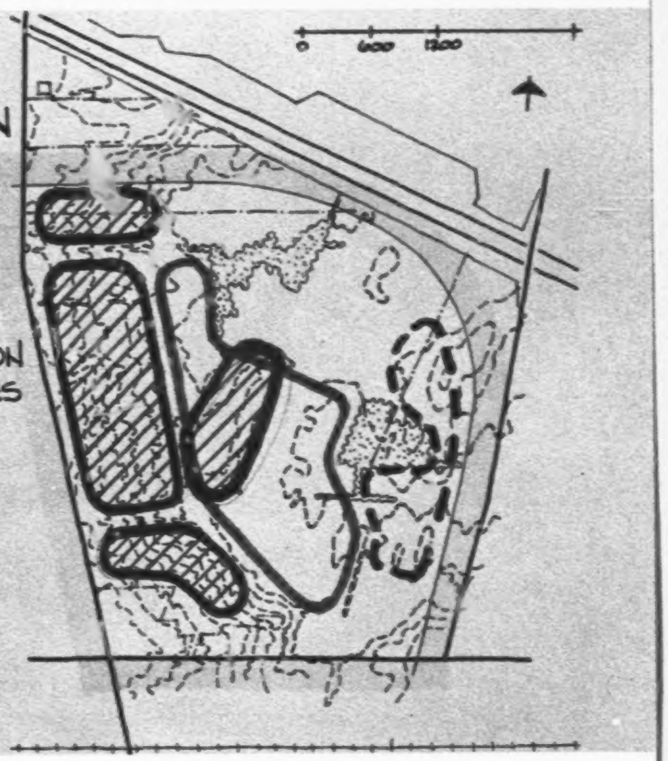
SITE UTILIZATION

▨ BUILDABLE AREAS
⬚ POSSIBLE BUILDINGS
▢ FLAT AREA SUITABLE FOR PHYSICAL EDUCATION AND OUTDOOR ACTIVITIES



MONROE COLLEGE

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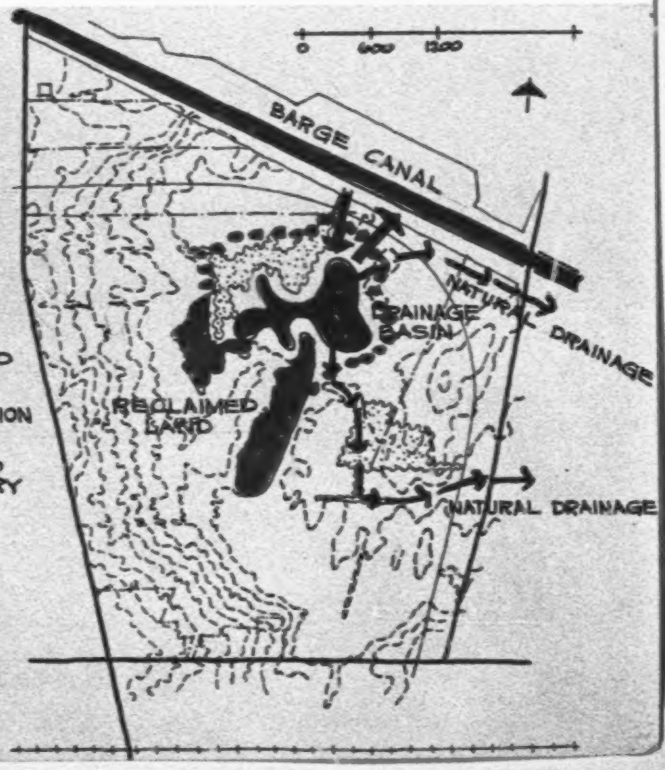
DRAINAGE 1

DRAINAGE BASIN CONCEPT:

BASIN WOULD BE CREATED BY EXCAVATION IN LOW LAND NEAR CANAL EAST OF EXISTING TREES. EXCAVATED EARTH WOULD BE USED TO RECLAIM ADDITIONAL AREAS OF LOW LAND. PIPED CIRCULATION SYSTEM WOULD DISPOSE OF EXCESS DRAINAGE WATER TO CANAL AND SUPPLY WATER TO BASIN FROM CANAL DURING DRY SEASONS. OR BASIN COULD DRAIN VIA NATURAL ROUTE.


0
600
1200
BARGE CANAL
DRAINAGE BASIN
NATURAL DRAINAGE
RECLAIMED LAND
NATURAL DRAINAGE

MONROE COLLEGE

Landscape

The term landscape, as used here, is intended to mean the inclusion of the entire site and its surrounding areas as well as the areas near and among the buildings.

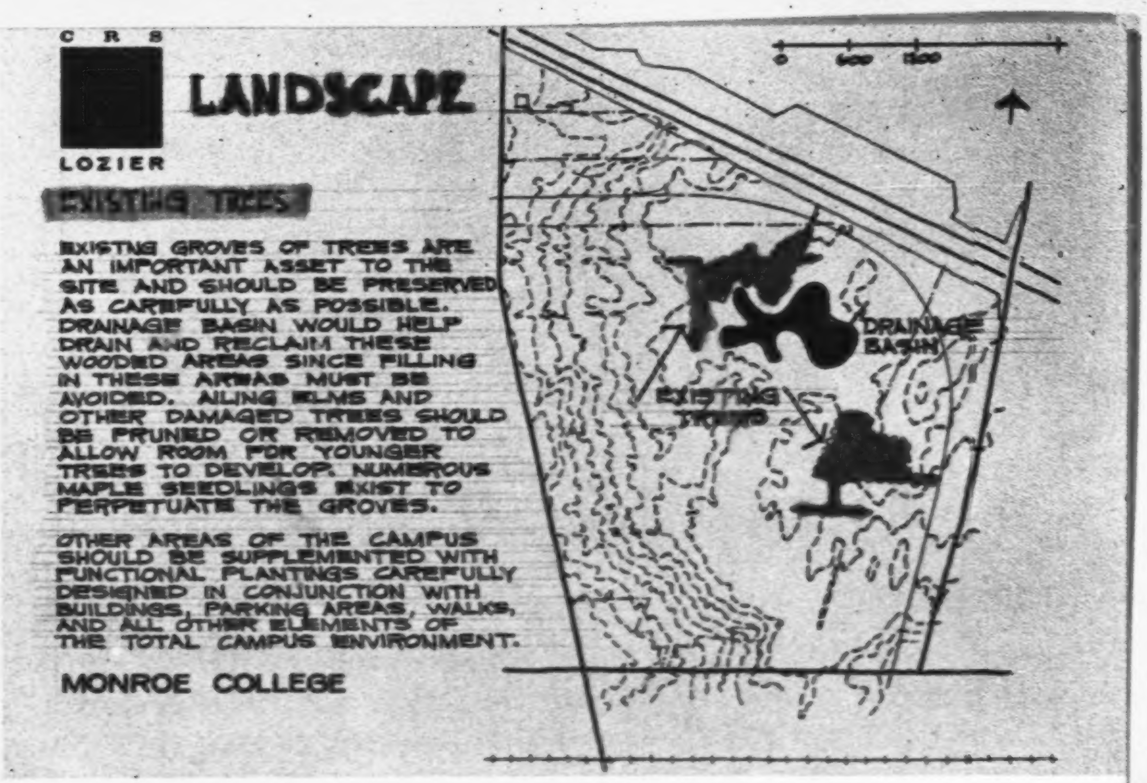
Native vegetation should be conserved as nearly as possible and native materials should be replanted where possible. An indigenous campus is easier to maintain and is more in keeping with natural surroundings of the region.

The existing groves of trees on the site are an important asset and should be preserved as carefully as possible.

Numerous evergreen plants indigenous to the area are well suited for use as windbreaks. These plants could be used often to protect building entrances and walks, and as snow fences along principal drives. Their presence also lends life and warmth to the winter scene.

Plants used in masses as ground cover also add warmth and texture to the landscape as well as serving the important function of soil conservation.

Other functions to be considered in the landscape are the screening of unwanted views from the campus and screening for privacy within the campus.



C R S

LANDSCAPE

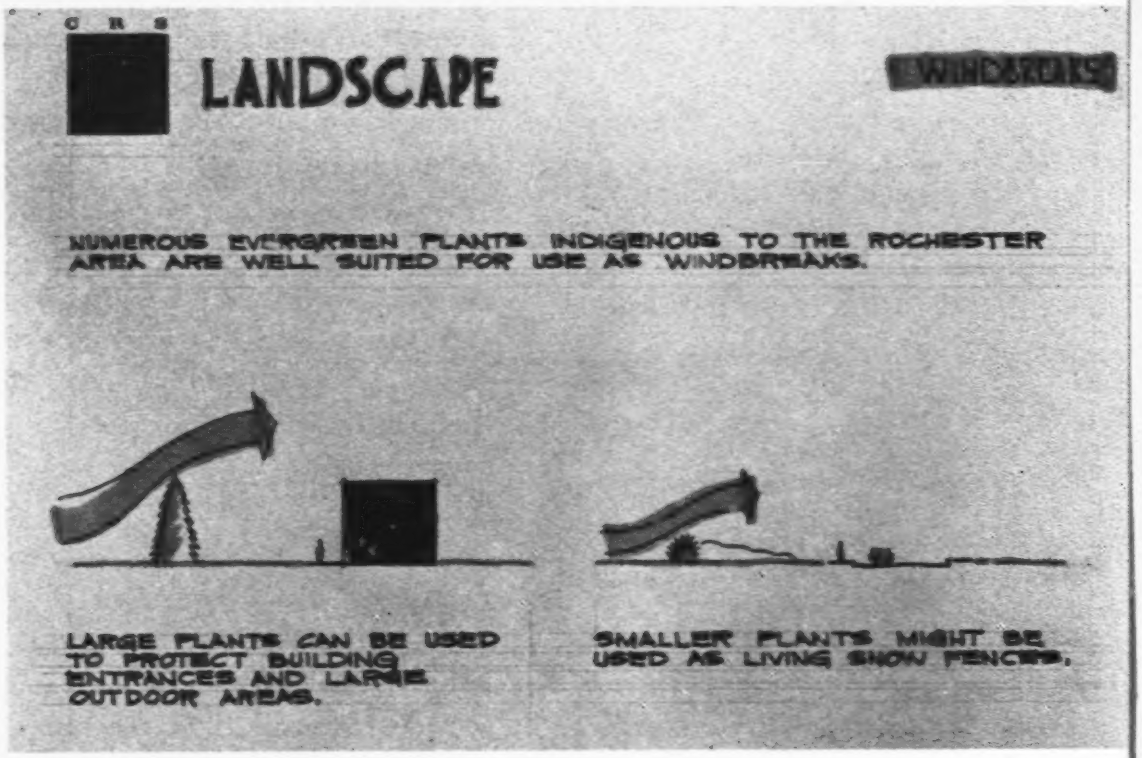
LOZIER

EXISTING TREES

EXISTING GROVES OF TREES ARE AN IMPORTANT ASSET TO THE SITE AND SHOULD BE PRESERVED AS CAREFULLY AS POSSIBLE. DRAINAGE BASIN WOULD HELP DRAIN AND RECLAIM THESE WOODED AREAS SINCE FILLING IN THESE AREAS MUST BE AVOIDED. AILING ELMS AND OTHER DAMAGED TREES SHOULD BE PRUNED OR REMOVED TO ALLOW ROOM FOR YOUNGER TREES TO DEVELOP. NUMEROUS MAPLE SEEDLINGS EXIST TO PERPETUATE THE GROVES.

OTHER AREAS OF THE CAMPUS SHOULD BE SUPPLEMENTED WITH FUNCTIONAL PLANTINGS CAREFULLY DESIGNED IN CONJUNCTION WITH BUILDINGS, PARKING AREAS, WALKS, AND ALL OTHER ELEMENTS OF THE TOTAL CAMPUS ENVIRONMENT.

MONROE COLLEGE



C R S

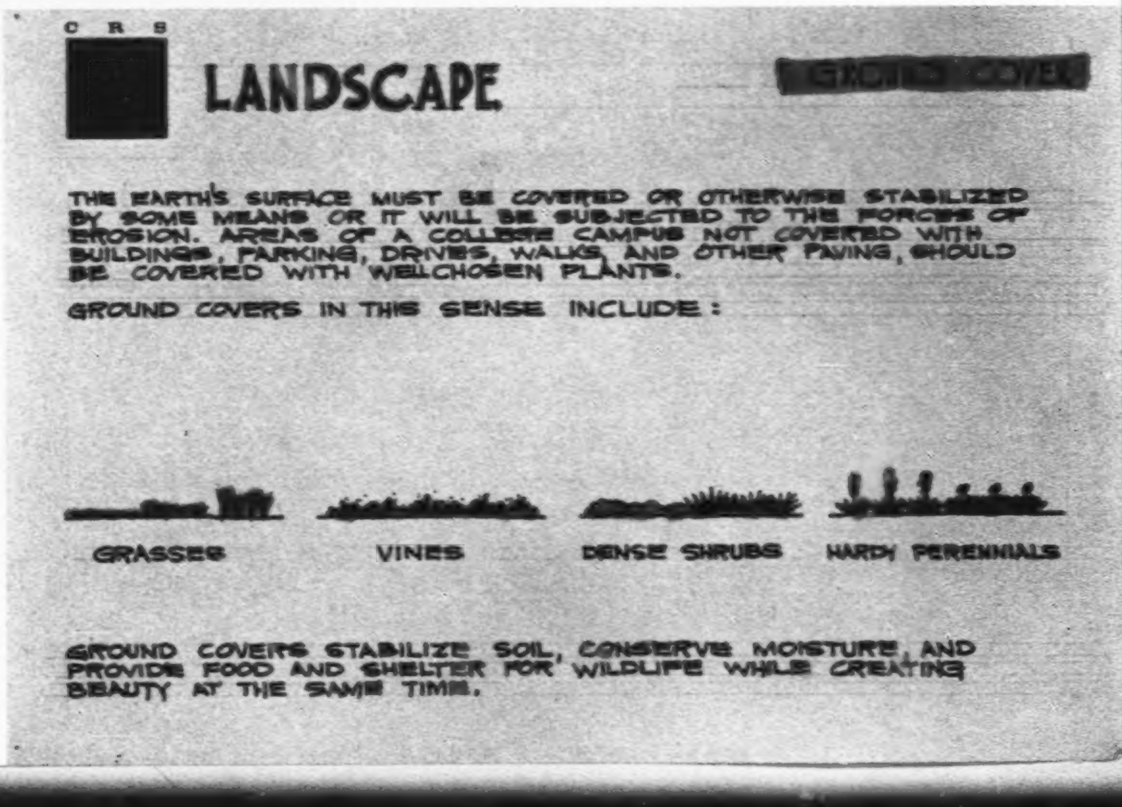
LANDSCAPE

WINDBREAKS

NUMEROUS EVERGREEN PLANTS INDIGENOUS TO THE ROCHESTER AREA ARE WELL SUITED FOR USE AS WINDBREAKS.

LARGE PLANTS CAN BE USED TO PROTECT BUILDING ENTRANCES AND LARGE OUTDOOR AREAS.

SMALLER PLANTS MIGHT BE USED AS LIVING SNOW FENCES.



C R S

LANDSCAPE

GROUND COVER

THE EARTH'S SURFACE MUST BE COVERED OR OTHERWISE STABILIZED BY SOME MEANS OR IT WILL BE SUBJECTED TO THE FORCES OF EROSION. AREAS OF A COLLEGE CAMPUS NOT COVERED WITH BUILDINGS, PARKING, DRIVES, WALKS, AND OTHER PAVING, SHOULD BE COVERED WITH WELLCHOSEN PLANTS.

GROUND COVERS IN THIS SENSE INCLUDE:

GROUND COVERS STABILIZE SOIL, CONSERVE MOISTURE, AND PROVIDE FOOD AND SHELTER FOR WILDLIFE WHILE CREATING BEAUTY AT THE SAME TIME.

Circulation

The basic objective in planning circulation is to create a safe pedestrian campus. This is done by striving for a clear separation between vehicular and pedestrian routes to avoid the dangerous conflict of people and moving vehicles.

The best and most obvious approach to this objective is the use of a circumferential loop system as shown in the first diagram. Such a loop allows vehicular access and parking on all sides of the campus while leaving the interior free of vehicles for safe and easy pedestrian circulation. In most instances a complete separation of vehicular and pedestrian circulation can be achieved through the use of the loop system. Its chief disadvantage is cost, since the loop requires a considerable length of pavement to accomplish its purpose.

A less expensive system is the central spine as illustrated in the second diagram. This system requires less pavement and provides the most direct vehicular access to buildings. Its chief disadvantage is a serious conflict between vehicular and pedestrian circulation.

Another important factor in the circulation system is to discourage the use of the campus drive by through traffic attempting to avoid traffic lights at major street intersections, as indicated in the last diagram.

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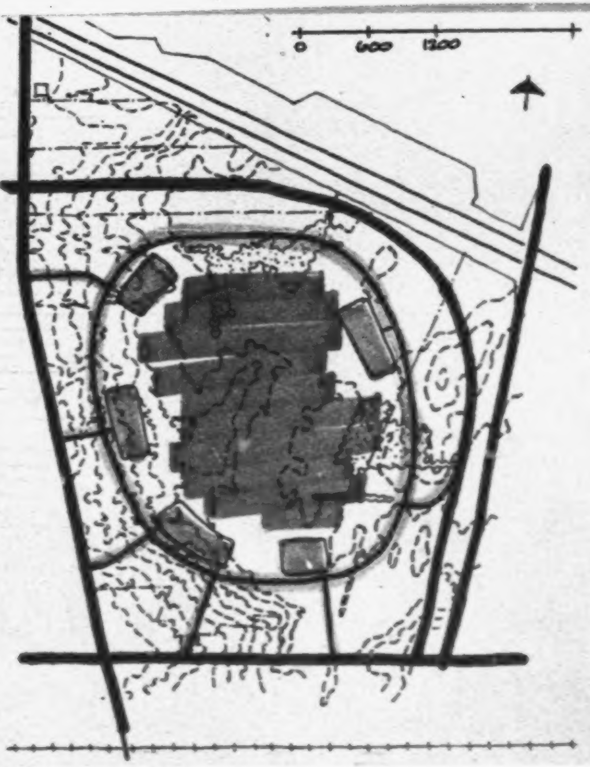
CIRCULATION

CIRCUMFERENTIAL LOOP

GOOD VEHICLE-PEDESTRIAN SEPARATION
ALLOWS MAXIMUM EXPANSION
MAXIMUM FLEXIBILITY FOR BUILDING LOCATION

MOST EXPENSIVE
HARDER TO BUILD IN STAGES

MONROE COLLEGE



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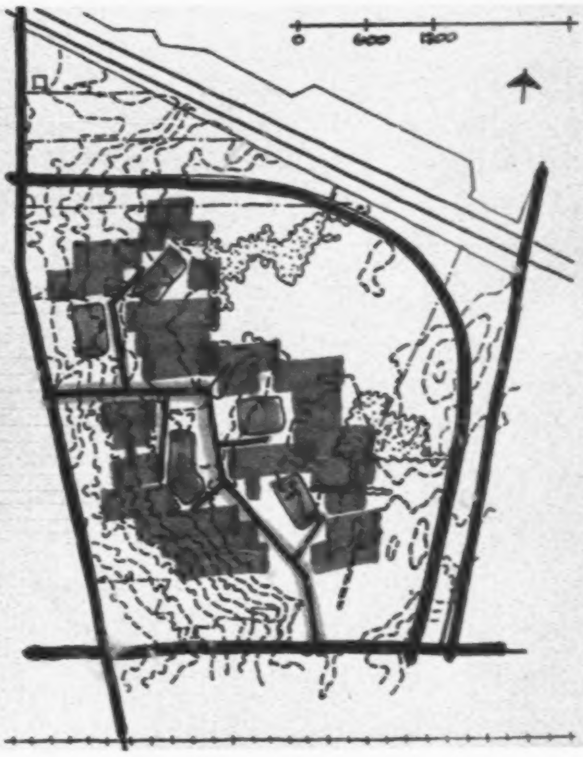
CIRCULATION

CENTRAL SPINE

MOST DIRECT VEHICLE ACCESS TO BUILDING AREAS
EASY TO BUILD IN STAGES
EASY TO EXPAND

MOST SERIOUS PEDESTRIAN-VEHICLE CONFLICTS

MONROE COLLEGE



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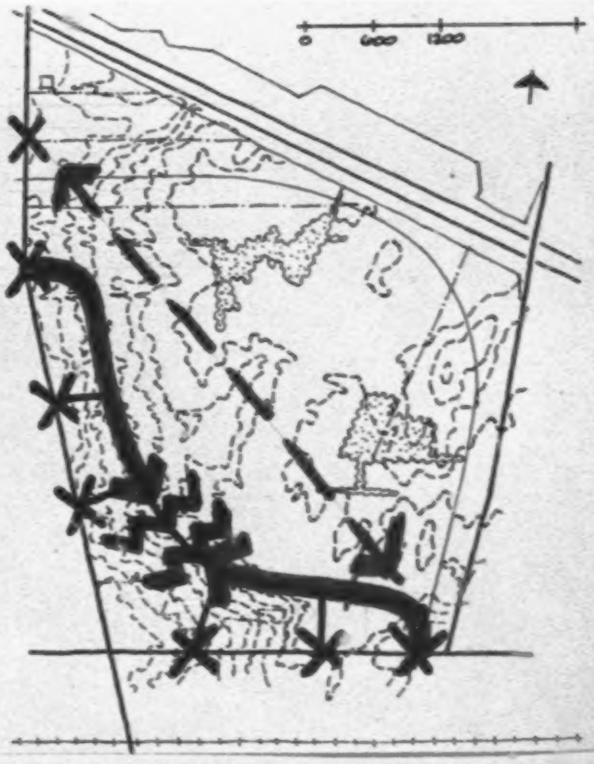
LOZIER

URBAN-CAMPUS TRAFFIC

CAMPUS CIRCULATION SYSTEM MUST BE DESIGNED TO ELIMINATE GENERAL PUBLIC SHORTCUTTING TO AVOID TRAFFIC LIGHTS

MONROE COLLEGE



PLAN

CONCEPT

The major factors which exert the greatest influence on the form of a college plan are:

Program
Site
Climate
Cost

Program, site, and climate have been analyzed in previous sections of this report. Cost is an underlying factor which is constantly considered during the development of any concept.

The general conclusions resulting from these analyses are as follows:

1. Because of its distinct characteristics, the climate is a strong factor.

2. The plan concept should lean toward a solution to climate control.

3. The plan, however, should not ignore the other factors but should also strive to be functional in regard to the program and realistic in regard to site utilization and cost.

In keeping with these conclusions a plan concept has been developed, referred to as "The Wall Concept", which is illustrated on page 69. The essential elements of the concept are as follows.

1. Individual buildings are large and compact and are physically connected to form a long continuous "wall."

2. The "wall" is oriented perpendicular to prevailing winter winds.

3. Primary vehicular access and circulation occur west of the "wall" leaving the area east of the wall for uninterrupted pedestrian circulation.

Program The large compact buildings reinforce the program by providing for close physical placement of related disciplines, with minimum distances for pedestrian circulation both indoors and outdoors.

Site The site is utilized to good advantage since:

1. The "wall" is on high ground and good soil.

2. Its length is parallel to the major access street which allows for good distribution of parking areas close to the "wall" and several convenient points of access.

3. The pedestrian campus utilizes the existing woods and low meadows.

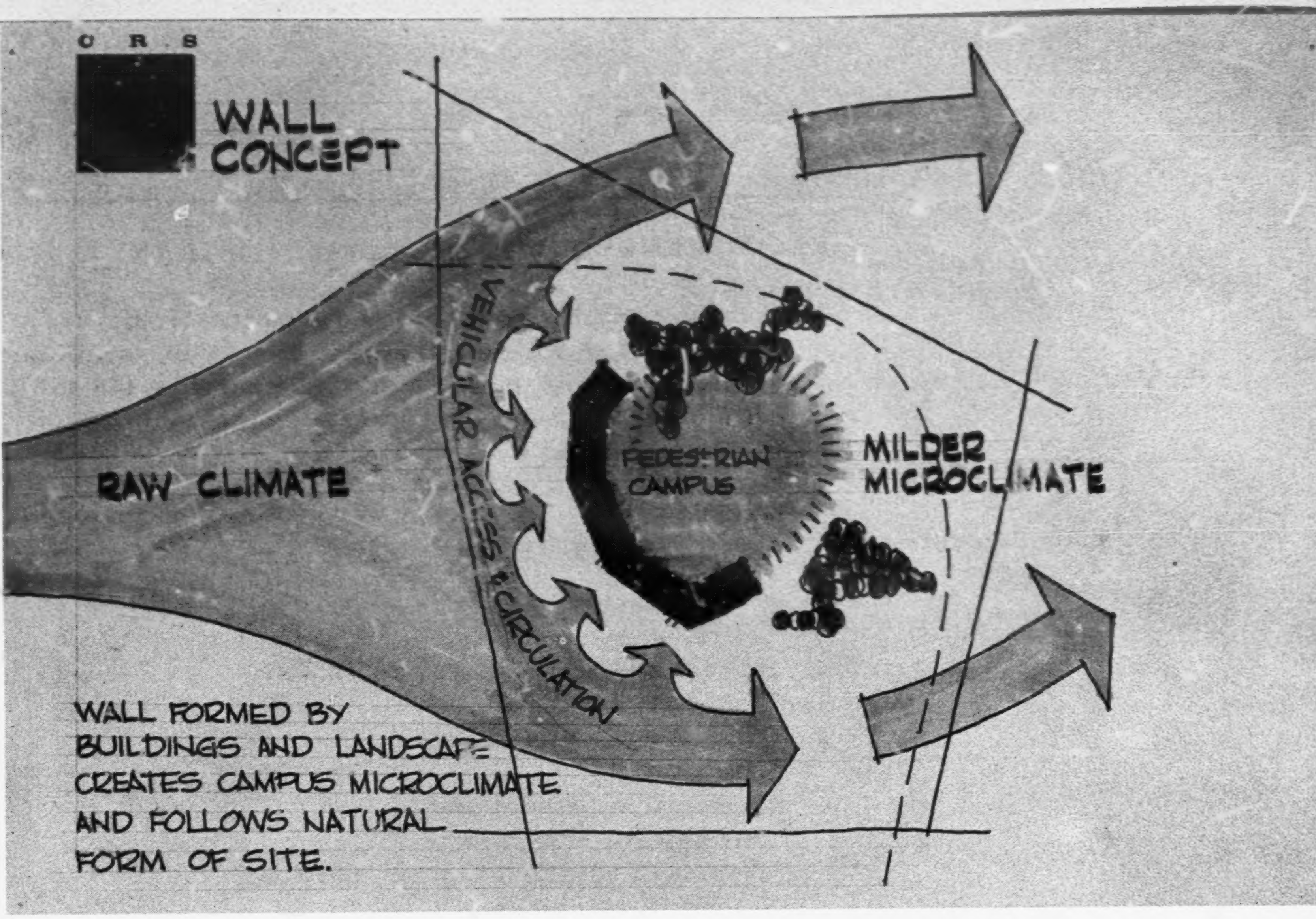
Climate The "wall" acts as a large windbreak to help modulate the climate extremes and create a milder microclimate in the pedestrian campus.

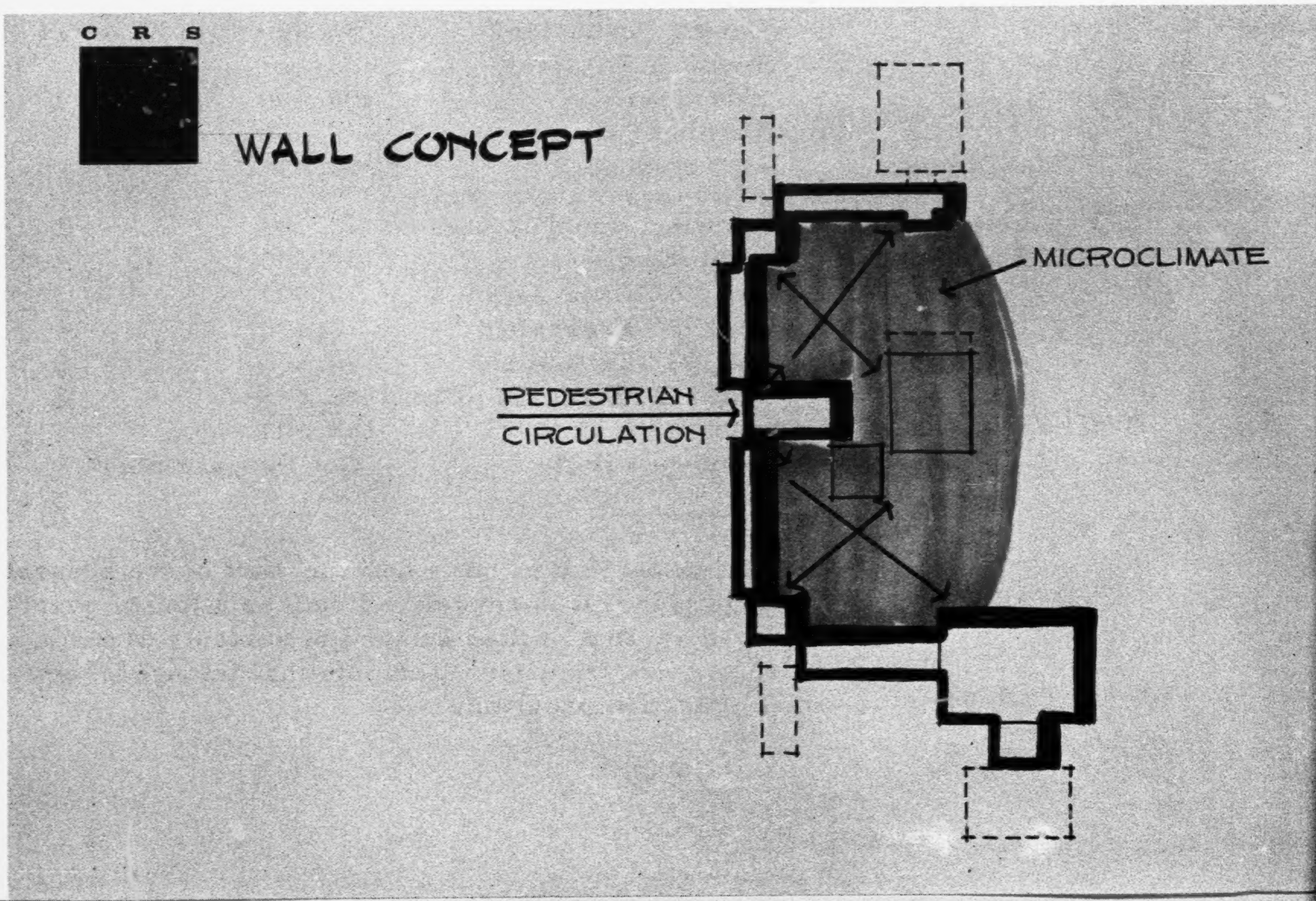
Cost The following characteristics of the "wall concept" should result in cost economy:

1. Large compact buildings - economical to construct and operate

2. Compact grouping of buildings -- Economical distribution of utilities and services

3. "Wall" is parallel to topographic contours -- economical site development


C R S
WALL CONCEPT
RAW CLIMATE
VEHICULAR ACCESS & CIRCULATION
PEDESTRIAN CAMPUS
MILDER MICROCLIMATE
WALL FORMED BY BUILDINGS AND LANDSCAPE CREATES CAMPUS MICROCLIMATE AND FOLLOWS NATURAL FORM OF SITE.


C R S
WALL CONCEPT
MICROCLIMATE
PEDESTRIAN CIRCULATION

RECOMMENDED PLAN

The accompanying plan is a refinement of the basic concept based on the space requirements as tabulated below by individual buildings. It represents the total plan recommended for the future development of Monroe Community College.

		Building Designation	Gross Floor Area sq. ft.	Height Stories
4000 Students				
	1.	Administration	39,698	2
	2.	Library	87,130	5
	3.	Student Center	72,000	2
	4.	Fine Arts (Unit "B")	30,450	1
	5.	Offices & Lecture Room (Unit "A")	32,700	3
	6.	Humanities, Social and Behavioral Sciences, Business (Unit "A")	56,800	4
	7.	Sciences, Services Sciences & Technologies (Unit "C")	61,100	3
	8.	Offices & Lecture Rooms (Unit "C")	37,700	4
	9.	Mathematics & Engineering Technology	52,900	2
	10.	Health & Physical Education	108,400	1
	11.	Building Services	10,560	1
Total Space		4000 Students	589,438	
Expansion to 6000 Students	3a	Student Center Expansion	18,143	2
	4a	Auditorium	39,500	1
	5a	Unit "A" Expansion	30,090	3
		Unit "B" Expansion	2,570	
	8a	Unit "C" Expansion	45,613	3
	10a	Health & Phys. Ed. Exp.	32,643	1
Total Expansion			168,569	
	12	Residence Hall	Not Programmed*	

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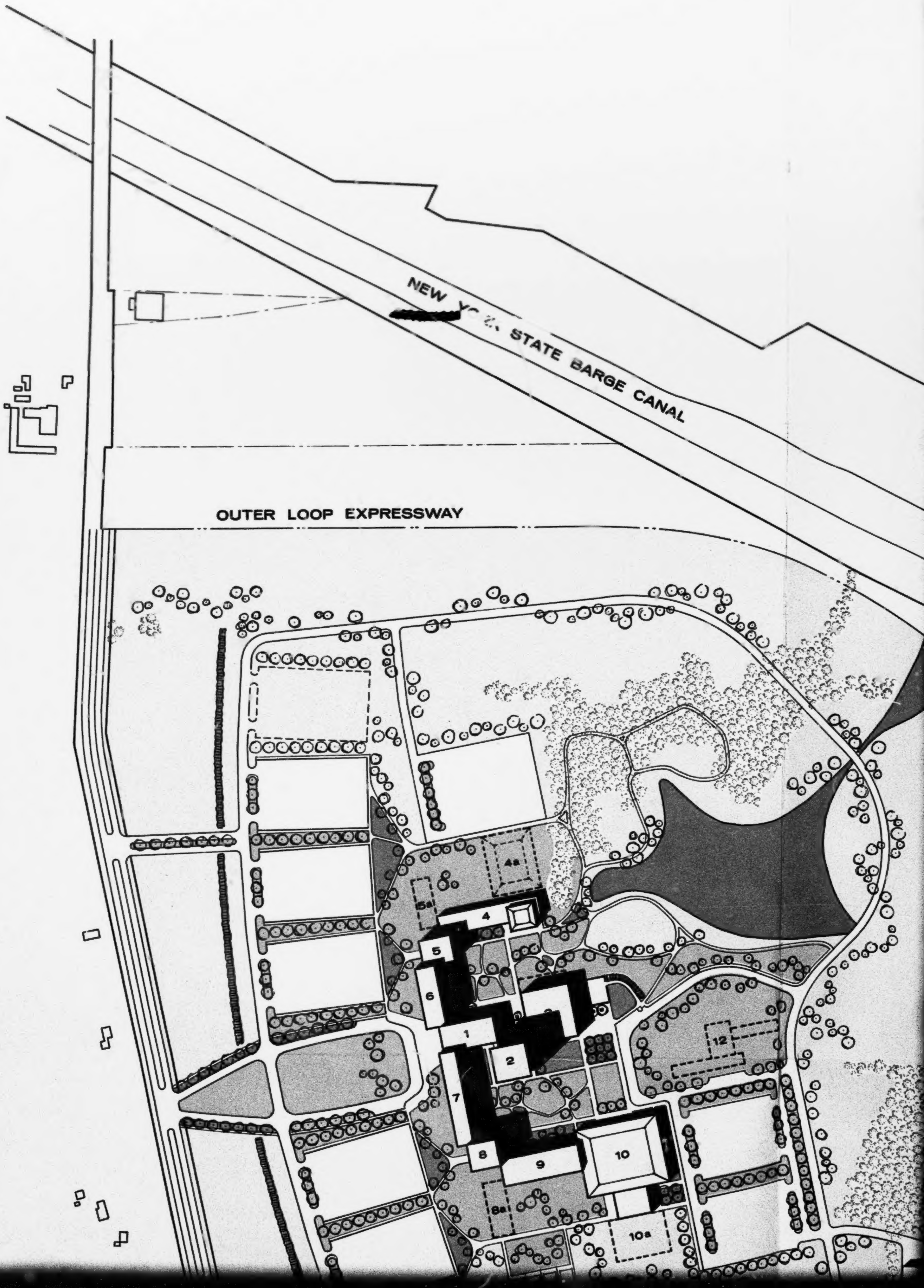
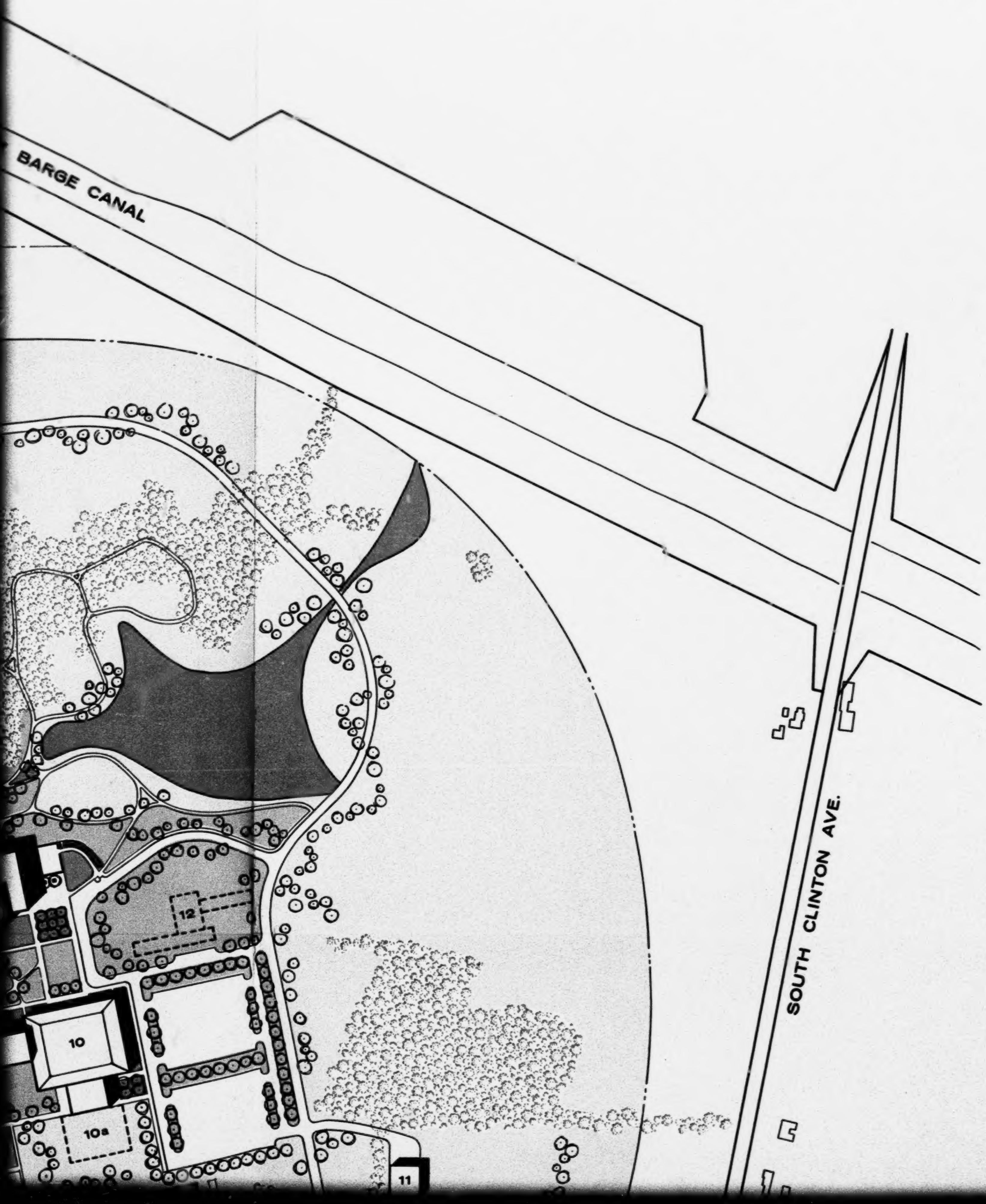
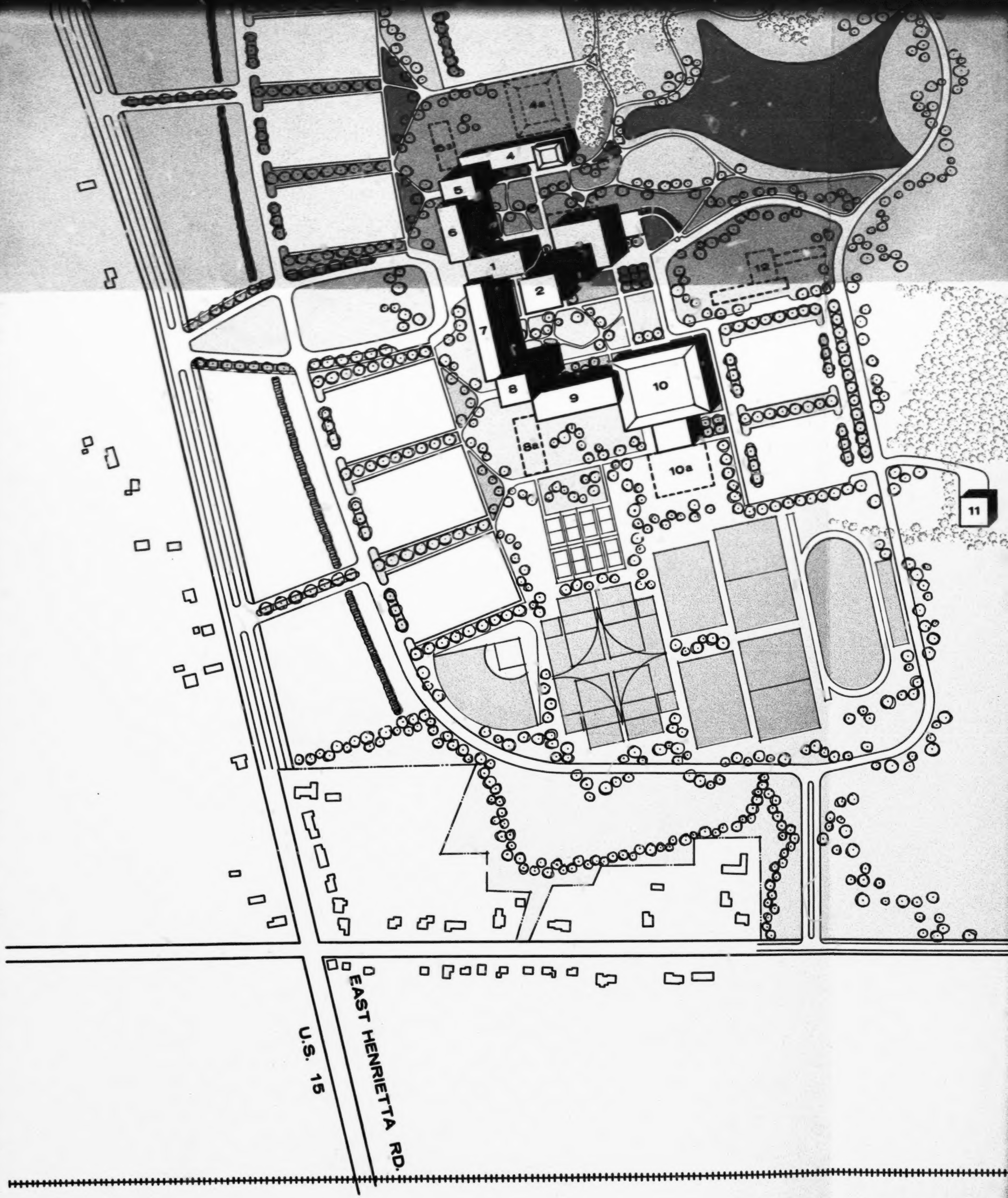
*A Residence Hall is not a definite part of the present college plan. It is considered only as a future possibility to house a limited number of students who might wish to come from beyond commuting distance for special education programs.


NEW YORK STATE BARGE CANAL
OUTER LOOP EXPRESSWAY
4a
5a
4
5
6
1
2
7
8
9
10
8a
10a
12


BARGE CANAL
SOUTH CLINTON AVE.
12
10
10a
11


4a
6a
4
5
6
1
2
12
7
8
9
10
8a
10a
11
U.S. 15
EAST HENRIETTA RD.

MONROE COMMUNITY COLLEGE

MONROE COUNTY, NEW YORK

COMPREHENSIVE CAMPUS PLAN

CAUDILL - ROWLETT - SCOTT
ARCHITECTS-PLANNING CONSULTANTS
HOUSTON, TEXAS

LOZIER ENGINEERS, INC.
ROCHESTER, NEW YORK

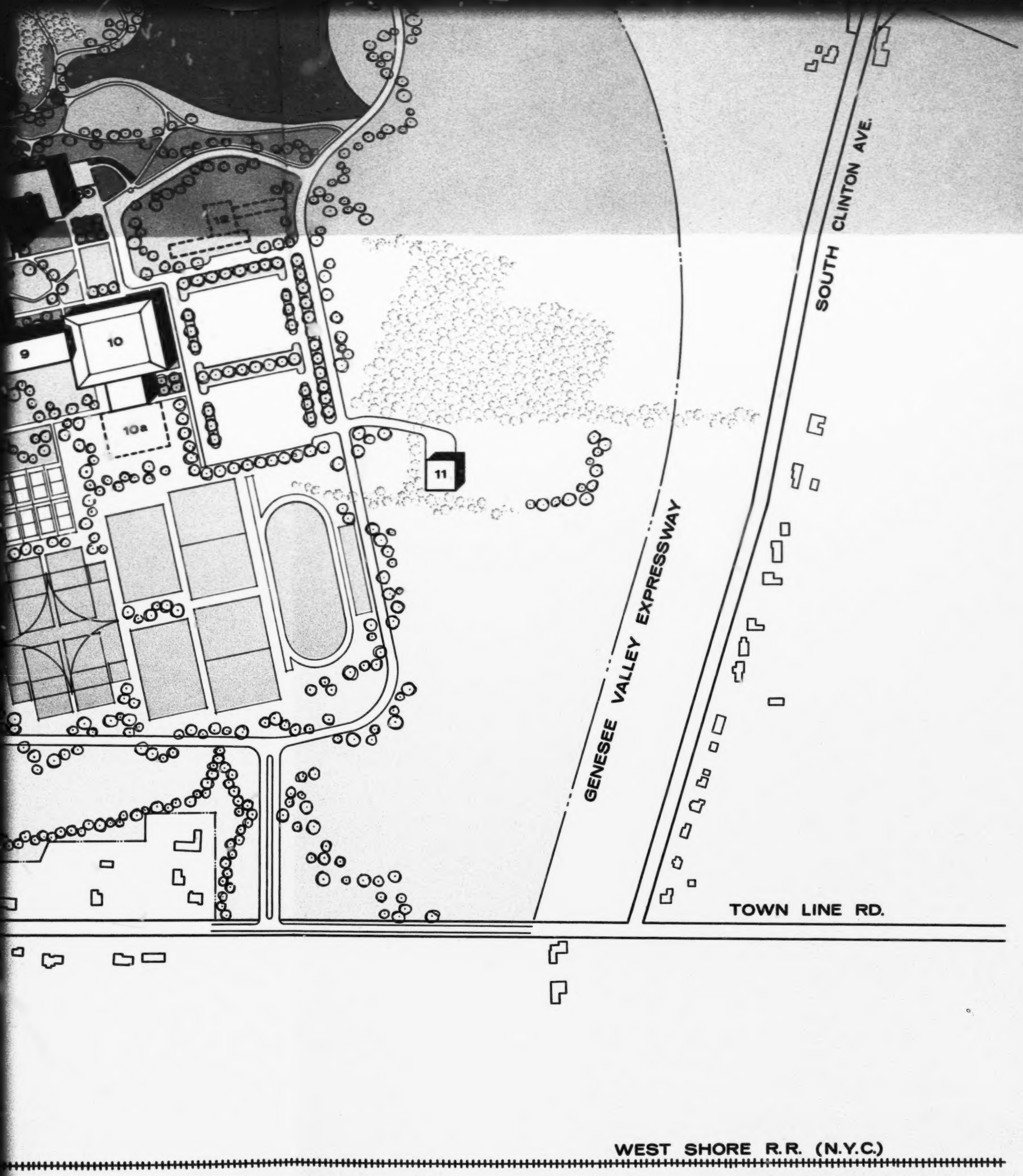
FEET 200 400 800

CAMPUS D

NATIVE GRASSES AND MEAD

MOWED

SHRUBS AND GROUND C


12
9
10
10a
11
SOUTH CLINTON AVE.
GENESEE VALLEY EXPRESSWAY
TOWN LINE RD.
WEST SHORE R.R. (N.Y.C.)

CAMPUS DEVELOPMENT PLAN

NATIVE GRASSES AND MEADOWS ░

EXISTING TREES

MOWED TURF ▒

SHRUBS AND GROUND COVER ■

PLANTED TREES

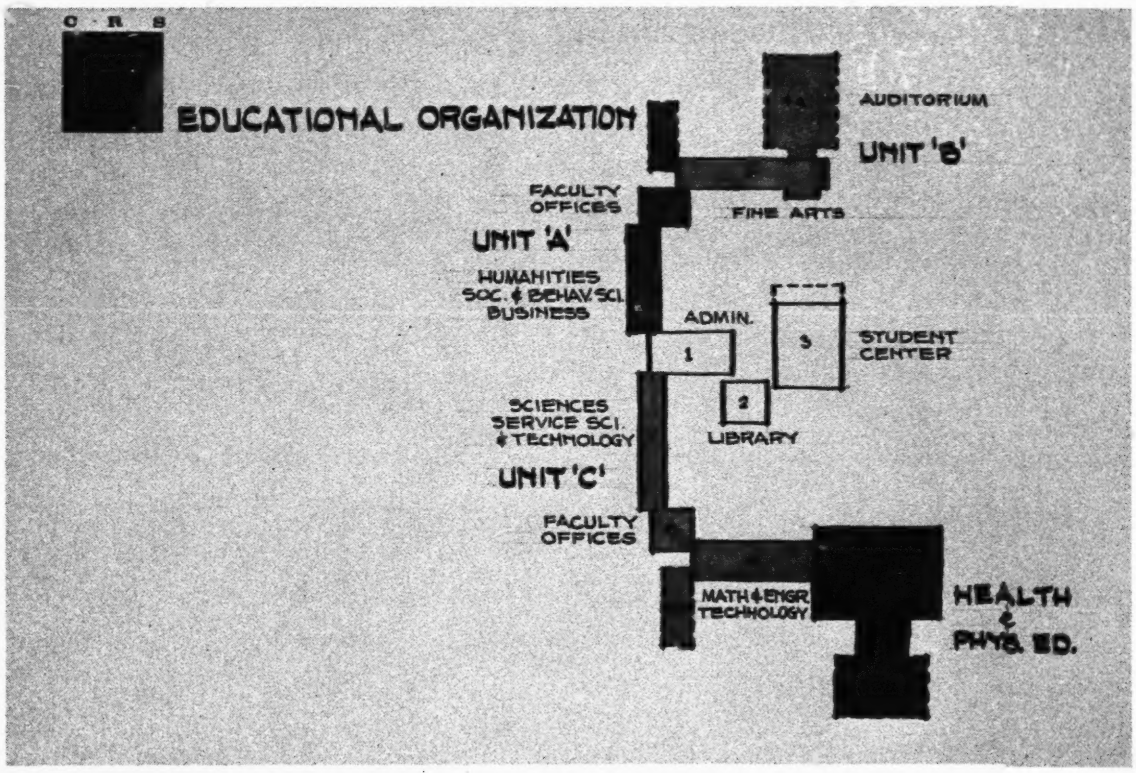
Educational Organization

This illustration shows in diagrammatic form how the grouping of related functions into the large buildings facilitates the program.

The unit designations refer to those on the functional relationships diagram presented earlier in the report.

Building No. 5, in addition to faculty offices, also includes lecture rooms and a large coat room to be used jointly by all divisions in Unit "A".

Building No. 8, also includes lecture rooms and a large coat room to be used jointly by all divisions in Unit "C".


C·R·S
EDUCATIONAL ORGANIZATION
AUDITORIUM
UNIT 'B'
FACULTY OFFICES
FINE ARTS
UNIT 'A'
HUMANITIES
SOC. & BEHAV. SCI.
BUSINESS
ADMIN.
1
3
STUDENT CENTER
2
LIBRARY
SCIENCES
SERVICE SCI.
& TECHNOLOGY
UNIT 'C'
FACULTY OFFICES
MATH & ENGR TECHNOLOGY
HEALTH & PHYS. ED.

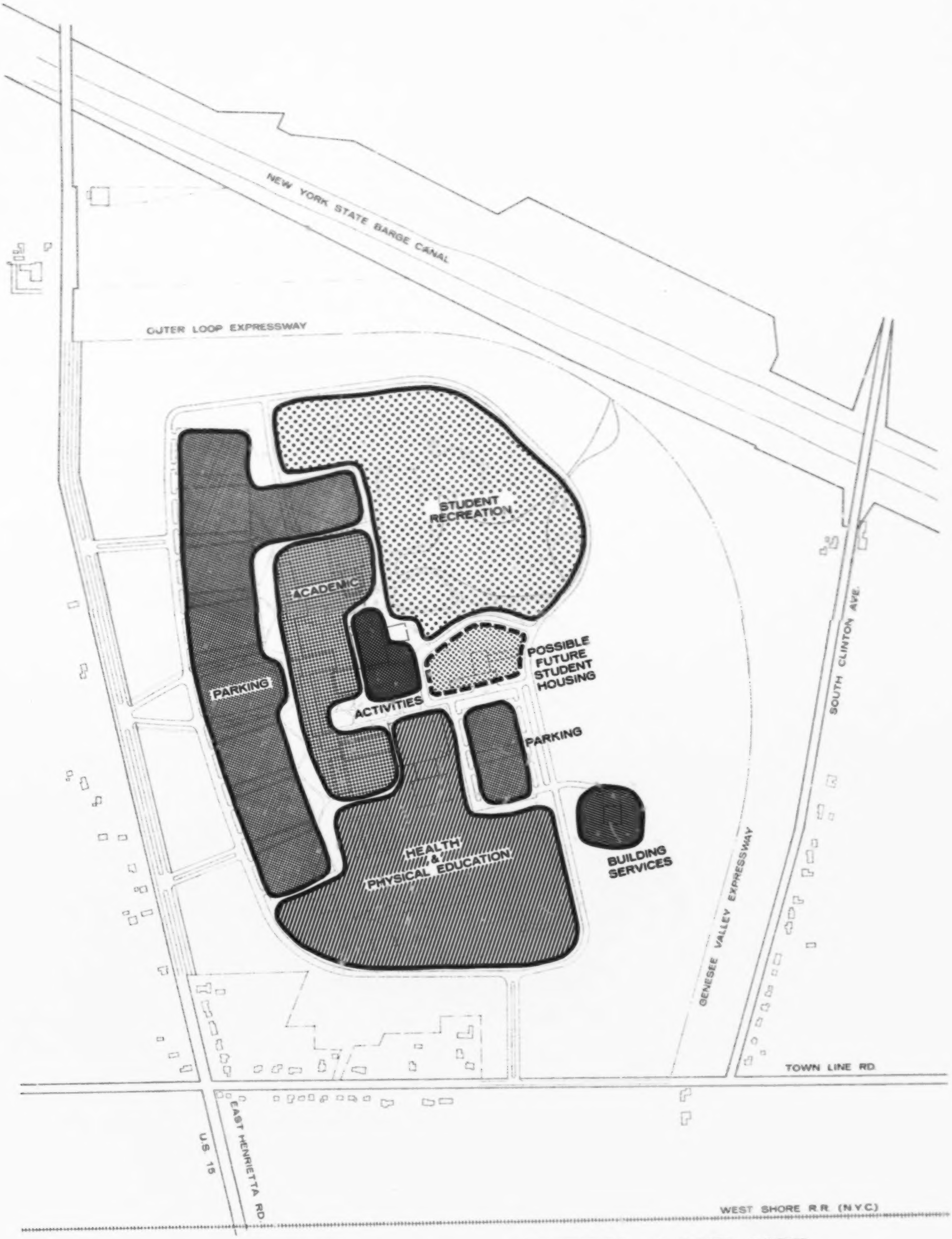
Land Use

The accompanying map shows the recommended zoning of the campus into seven basic land uses:

- Academic
- Activities
- Health & Phys. Ed.
- Parking
- Student Recreation
- Possible Student Housing
- Building Services

The recommended plan contained in this report is valid for the program given. If the program should change through the years, building requirements might change also. The land use plan is the framework within which these changes should occur. It is quite possible that a variety of building arrangements might result in an attractive and functional campus, but the land use plan should be followed in order to take maximum advantage of the site and avoid the type of errors in building location which have caused chaos on so many campuses.

Academic, activities, health and physical education, parking and student recreation zones are accurately located and are closely related to each other by the program and the site. Building services and possible future student housing zones are more flexible in their location. Student housing is not actually programmed at this time. These two zones could be located elsewhere if necessary and work as well as the recommended locations shown on this map.


NEW YORK STATE BARGE CANAL
OUTER LOOP EXPRESSWAY
STUDENT RECREATION
ACADEMIC
PARKING
ACTIVITIES
POSSIBLE FUTURE STUDENT HOUSING
PARKING
HEALTH & PHYSICAL EDUCATION
BUILDING SERVICES
GENESEE VALLEY EXPRESSWAY
SOUTH CLINTON AVE.
TOWN LINE RD.
US 15
EAST HENRIETTA RD.
WEST SHORE R.R. (N.Y.C.)

MONROE COMMUNITY COLLEGE
MONROE COUNTY, NEW YORK

COMPREHENSIVE CAMPUS PLAN

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GENERAL LAND USE

Circulation And Parking

The next three pages of illustrations relate to the circulation and parking system. The first two diagrams on the opposite page illustrate vehicular and pedestrian circulation in that order.

The upper diagram was conceived during the early preliminary planning stages and does not entirely coincide with the final plan. It is included to illustrate the "broken" loop which is designed to discourage through traffic from the campus drives. Only service and maintenance vehicles would be allowed to jump the break in the loop; all other vehicles would have to circulate around the east side of the campus.

It was decided during the refinement of the final plan that the broken loop was not practical. Therefore, the final plan reverted to the complete loop. One of the entrance drives from Town Line Road was removed, however, and all entrance drives were made to form "T" intersections with the loop drive. It is thought that this will make driving through the campus difficult enough to discourage through traffic. If necessary, stop signs may be used at the "T" intersections.

The lower diagram shows pedestrian circulation within the building complex. Three entrances to the "wall" are shown; one to the administration building and one each to the office buildings which house the coat rooms. Because the buildings are connected, people can circulate indoors during extremely bad weather. Outdoor circulation will be protected from cold winds by the "wall."

The two diagrams on page 78 illustrate the arrangement of parking lots to break the monotony of large areas of pavement and to allow for easy snow removal.

The map on page 79 is a composite of all vehicular and pedestrian circulation as shown on the final plan. The larger pedestrian areas shown in the central part of the campus represent: An open plaza under the library, the building itself being raised one story above ground level. Enclosed lobby and vestibule areas on the ground floor of the administration building and the two office buildings.

A few walks within the pedestrian campus would be designed to carry vehicles to allow for emergency access for fire protection and occasional servicing.

C R S

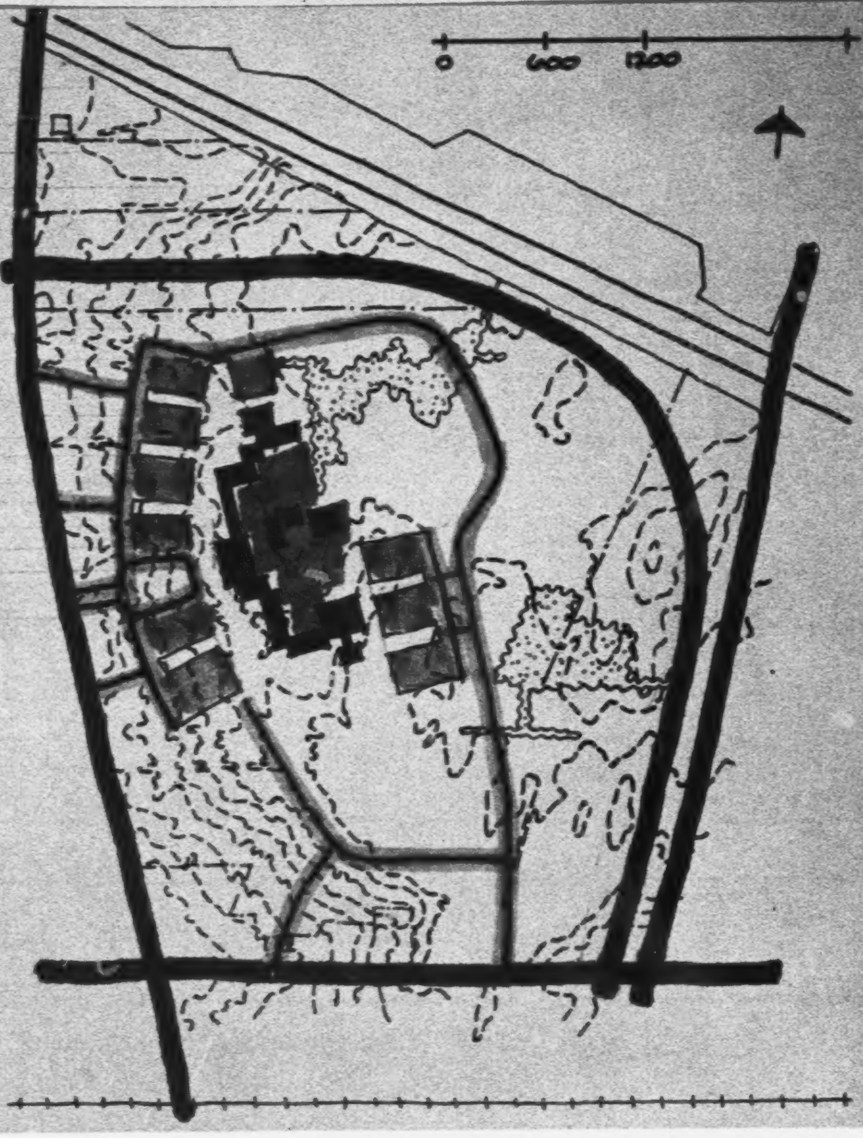
LOZIER

CIRCULATION & PARKING

CIRCUMFERENTIAL LOOP

SEPARATION OF URBAN AND CAMPUS TRAFFIC WITH "BROKEN" LOOP.
DISPERSED PARKING WITH DIRECT ACCESS.

MONROE COLLEGE



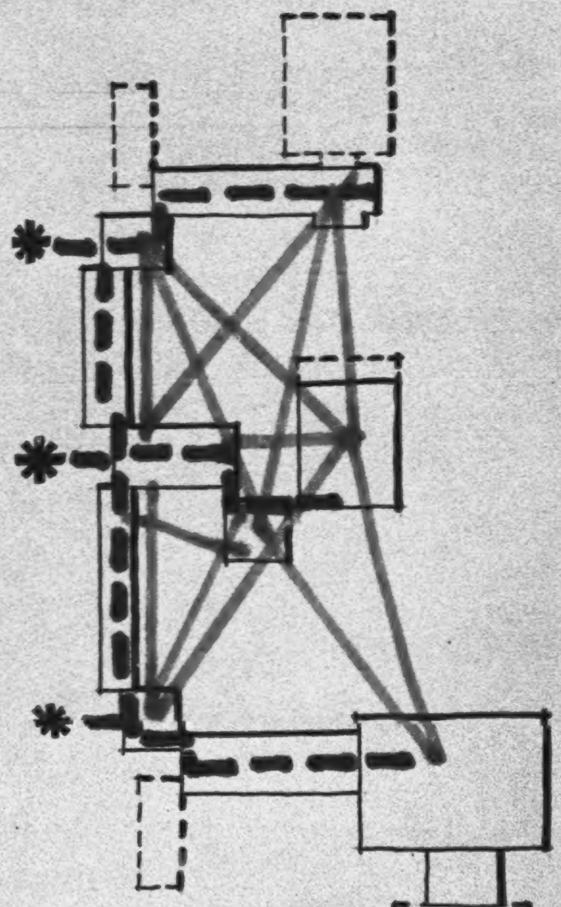
C R S

CIRCULATION

NORMAL OUTDOOR

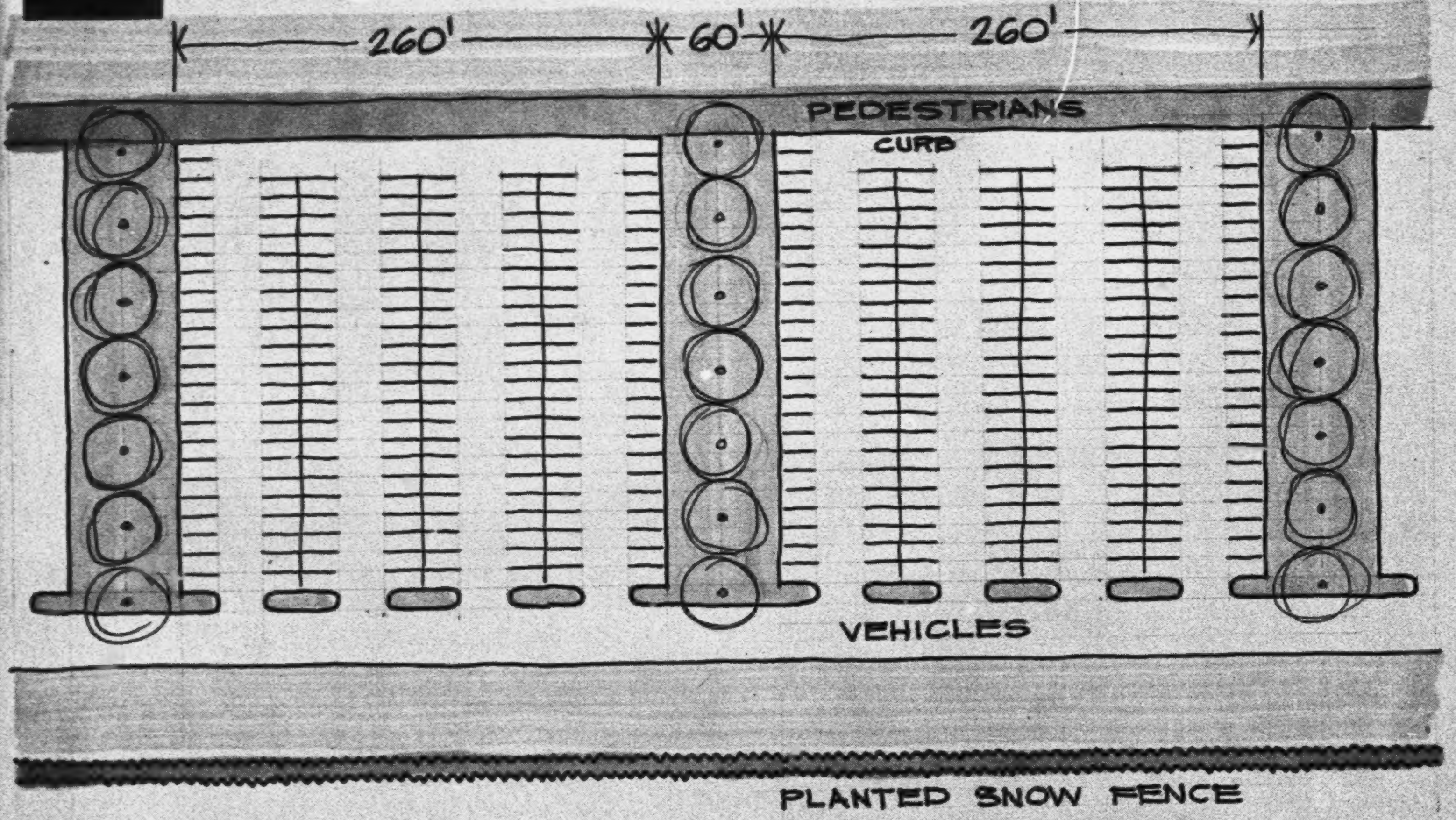
▬ ▬ INDOOR

✱ ENTRANCE



C R S

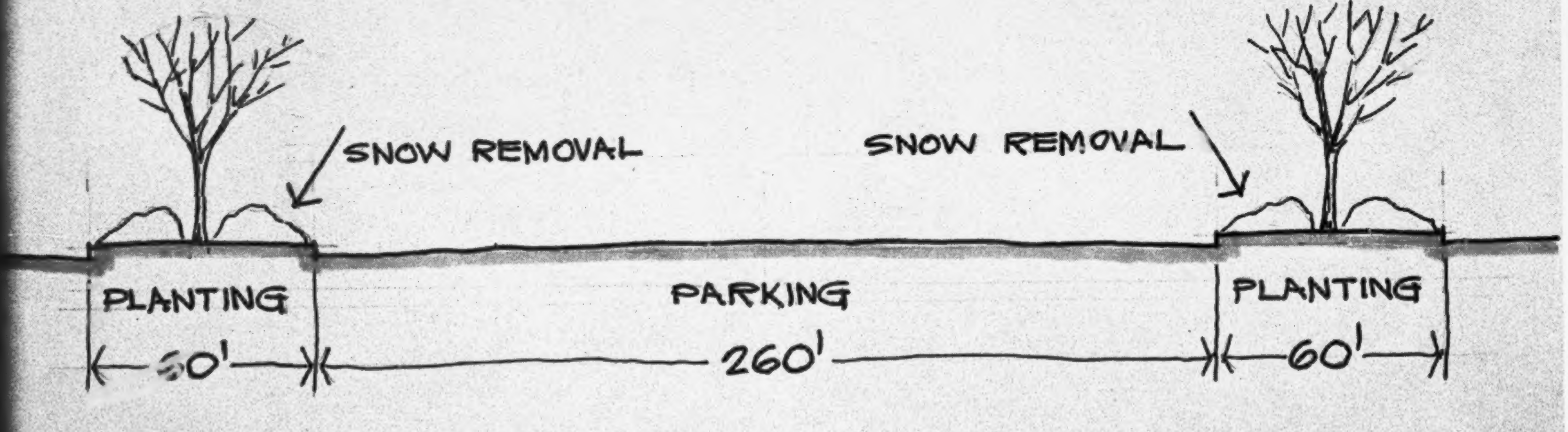
PARKING

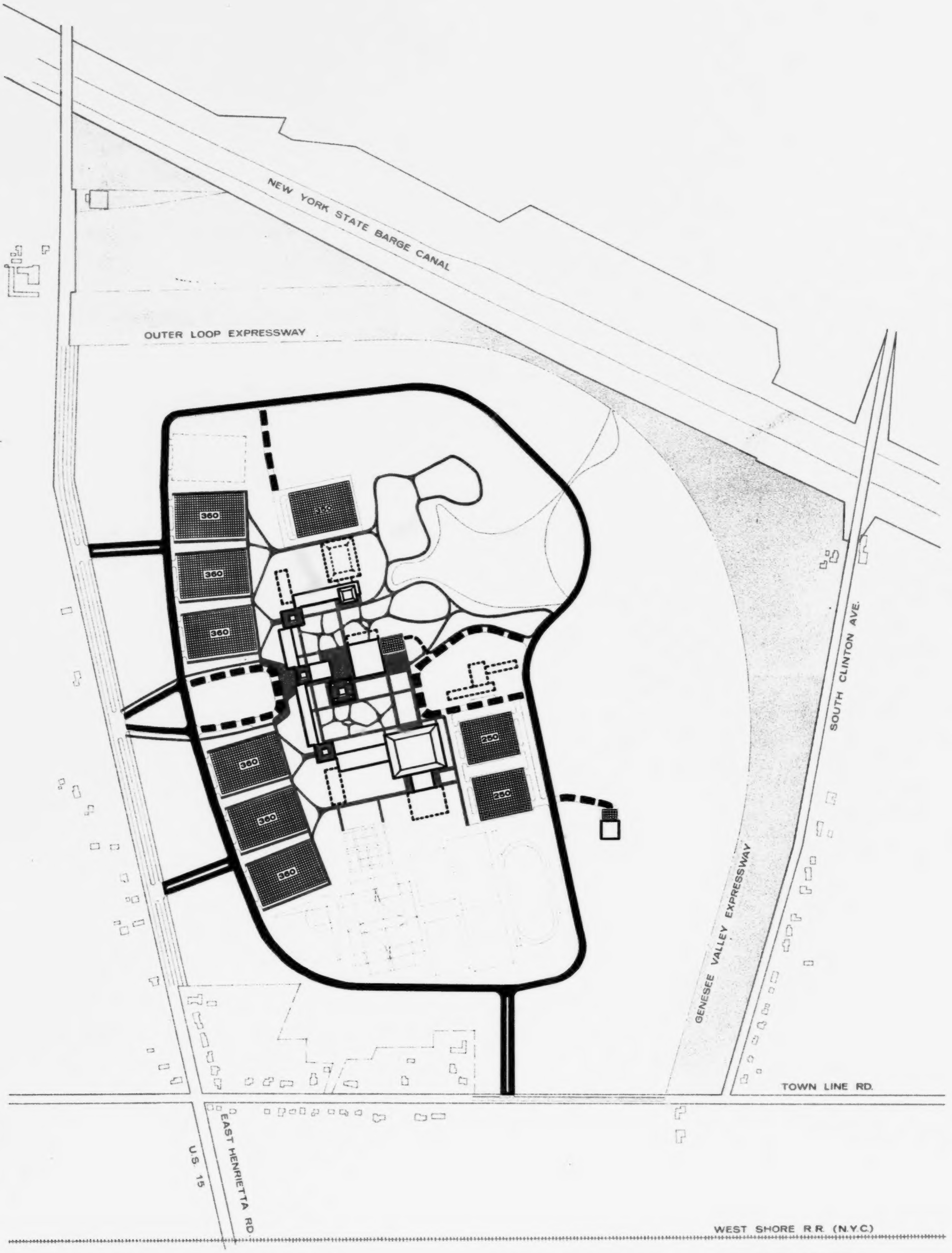

260'
60'
260'
PEDESTRIANS
CURB
VEHICLES
PLANTED SNOW FENCE

C R S

PARKING

GENEROUS PLANT STRIPS IN PARKING AREAS ALLOW FOR TREE PLANTING TO BREAK UP LARGE EXPANSES OF PAVING AND PROVIDE ROOM FOR SNOW REMOVAL.


SNOW REMOVAL
SNOW REMOVAL
PLANTING
PARKING
PLANTING
60'
260'
60'


NEW YORK STATE BARGE CANAL
OUTER LOOP EXPRESSWAY
SOUTH CLINTON AVE.
GENESEE VALLEY EXPRESSWAY
350
360
360
360
360
360
360
250
250
TOWN LINE RD.
U.S. 15
EAST HENRIETTA RD.
WEST SHORE R.R. (N.Y.C.)

MONROE COMMUNITY COLLEGE
MONROE COUNTY, NEW YORK
COMPREHENSIVE CAMPUS PLAN

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CIRCULATION & PARKING

PEDESTRIAN

WALKS & COURTS

PARKING

PARKING LOT & CAPACITY ▦360▦

VEHICULAR

URBAN ┅┅

CAMPUS PRIMARY ━━

CAMPUS SECONDARY & ACCESS ■ ■ ■

Utilities and Drainage

The utility plan proposed for the campus is shown on the opposite page. The layout is preliminary and in some respects diagrammatic. As the details of the plot plan are developed and buildings, streets and walks are firmly located, detailed design and engineering construction drawings for the utilities can be prepared. In general it is advisable to have site grading done and then the utilities constructed before the building construction begins.

It is extremely important that horizontal and vertical control grids be established and monumented on the site prior to the start of any construction work.

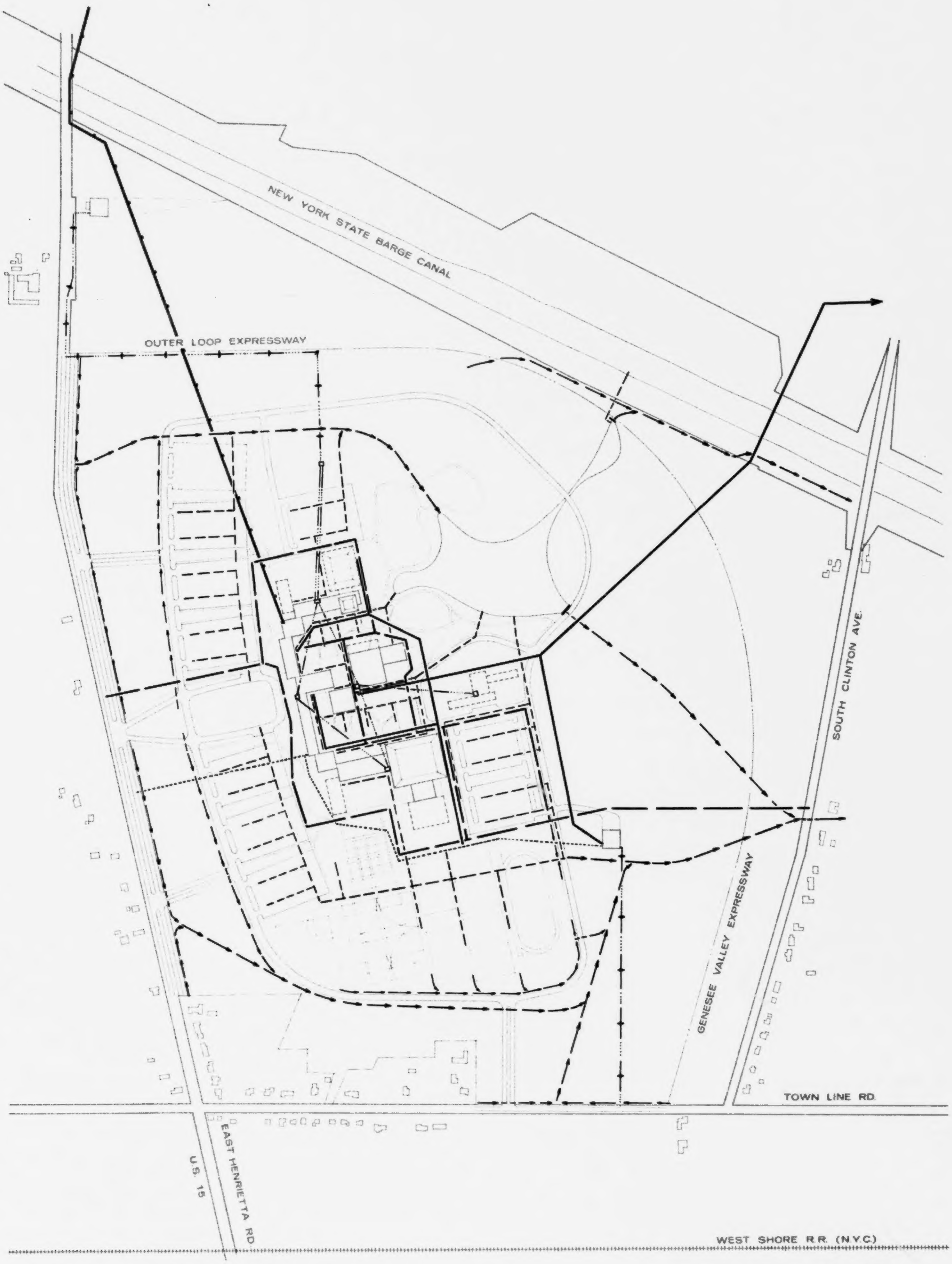
Watermains

From a new metered connection to the City of Rochester conduits in Clinton Avenue South, a principal feeder main crosses south of the main campus building and along the west side to the main entrance area. A connection to East Henrietta Road, and loops around the principal building complexes complete the layout. Closely spaced hydrants, line valves, and a minimum number of metered connections to the buildings will be required. Servicing agents will be the West Brighton Water District and the Monroe County Water Authority.

Sanitary Sewers

The proposed gravity sewer system runs from the existing trunk sewer in Westfall Road, near Roosevelt Road. It follows Allens Creek westward, past Winton Road, through undeveloped lands to about 400 feet west of Clinton Avenue South. It then crosses the Barge Canal, as shown on the plan, and serves the building complex from within the courtyard. Internal connecting plumbing for the Arts and Technical expansion wings must be constructed as the intervening buildings are built. It is recommended that the lowest usable floor of any building be set at or above elevation 505 for satisfactory sewer service.

The servicing agent is Brighton Sewer District No. 2. Suggested procedure is to create a Sewer District extension, consisting of an arbitrary negotiated number of acres including all buildings to be served. Sewers would be constructed with District funds, the cost being paid by the College annually as an assessment, and automatically shared with others using the sewer as development takes place along the route.


NEW YORK STATE BARGE CANAL
OUTER LOOP EXPRESSWAY
SOUTH CLINTON AVE.
GENESEE VALLEY EXPRESSWAY
TOWN LINE RD.
U.S. 15
EAST HENRIETTA RD
WEST SHORE R.R. (N.Y.C.)

MONROE COMMUNITY COLLEGE

MONROE COUNTY, NEW YORK

COMPREHENSIVE CAMPUS PLAN

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UTILITY PLAN

LEGEND

- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- DRAINAGE DITCH
- ELECTRIC SERVICE (Overhead)
- ELECTRIC SERVICE (Underground)
- STEAM & CONDENSATE RETURN LINES
- GAS SERVICE

Storm Drainage

Storm water from west of East Henrietta Road, the athletic fields and the west parking lots is routed around the campus buildings by major ditches on the north and south sides, and by a large trunk sewer on the south side. The campus courtyard and part of the east parking area are piped to the drainage basin. The basin, created for borrow used in site grading, will use outlet control structures to regulate flow in downstream ditches, and use storage capacity to hold back flash runoff from the large impervious areas of the campus. The courtyard, athletic fields, east parking area and the area west of the basin should be graded as high above elevation 500 as practical.

Electric Service

Primary power at 4160 volts is obtained from the substation in the northwest corner of the site, and transmitted overhead to a switching and metering point north of the north parking lot. The plan shows underground duplex service to the arts wing, and a primary underground loop to three additional transformer vaults in each main building omplex. Single underground service to the future Residence Hall, and overhead for the Building Services Building are shown. Servicing agent is the Rochester Gas and Electric Corp.

Gas Service

Gas service for the laboratory wing, and for heating the remotely located Building Services Building is shown on the plan. Steam and electric service for the kitchens in the Student Center Building is assumed. Servicing agent is the Rochester Gas and Electric Corp.

Steam

Steam lines from the existing Iola Steam Plant to the College building complex is shown on the plan. Additional boilers and improvements in the existing plant will be required. The capital cost is less than a new campus central steam plant, but more than individual building gas-fired boilers. Including fuel and operating costs, the Iola plan is the least expensive. Servicing agent is the County of Monroe.

ARCHITECTURAL CHARACTER

The following sketches illustrate the architectural character recommended for Monroe Community College.

The grey climate with its predominance of cloudy days suggest that color contrasts rather than shades and shadows must be relied upon for definition of architectural form. The use of dark colored exterior walls contrasted with a white structural frame would accomplish this purpose. The exact opposite could be used, but the dark brick walls seem to prevail in this area.

The climate also suggests that electric fixtures, rather than natural daylight should be assumed as the primary source of illumination in the buildings, eliminating the necessity for large areas of glass. The cold winters and long heating seasons also call for a very minimum use of glass in exterior walls. The use of small glass areas as shown in the sketches would be for view out of the buildings only, and not for interior daylight illumination.

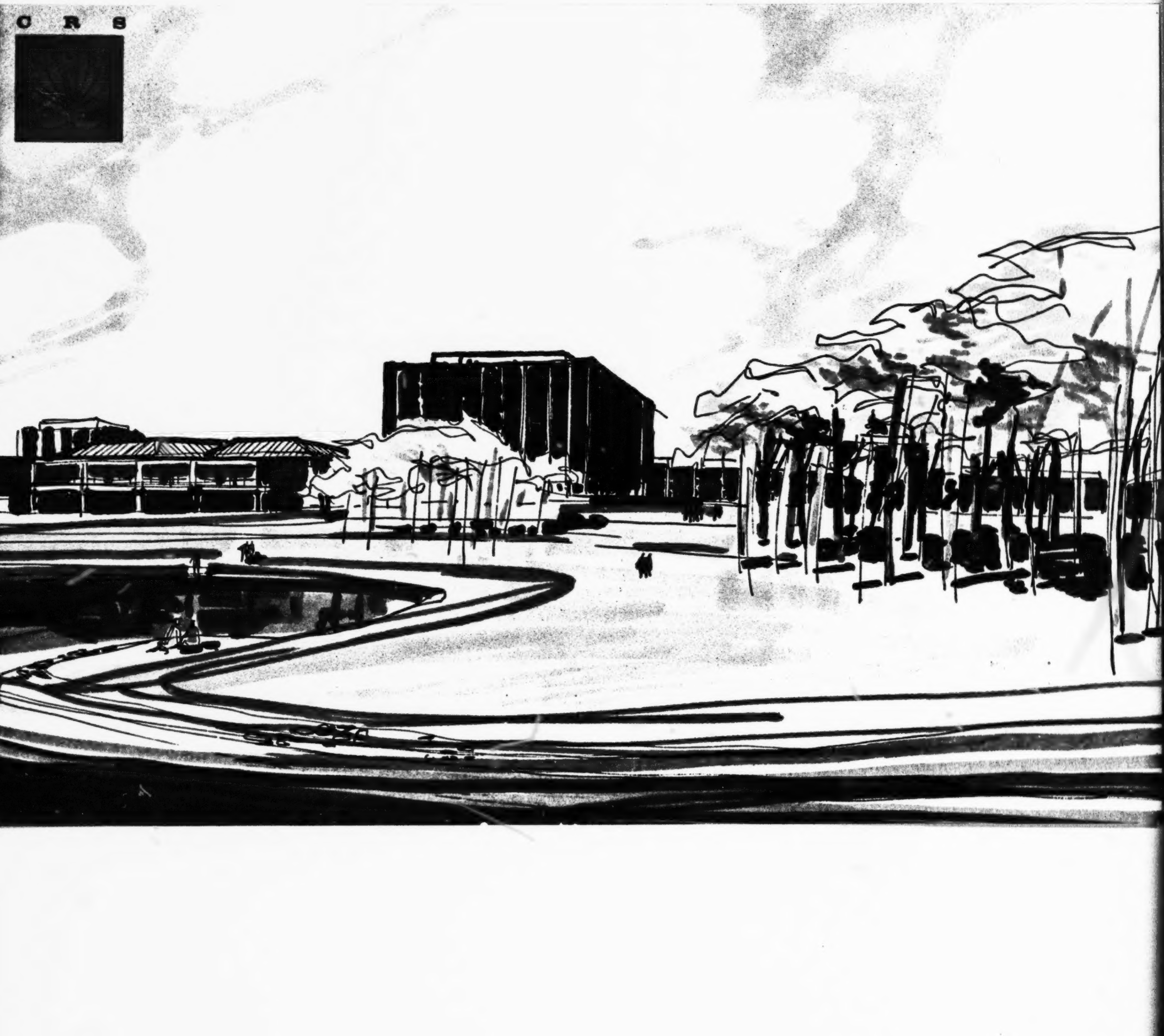
The buildings should be predominantly masonry to exhibit a feeling of quality, stability, and permanence in keeping with the general character of the Rochester area. The sketches assume the use of brick exterior walls combined with a reinforced concrete frame.

A simple repetitive structural system should be used for ease of construction and cost economy. Such a system also lends itself to economical utilities systems and to convertibility of usage which might be required by future changes in educational philosophy.

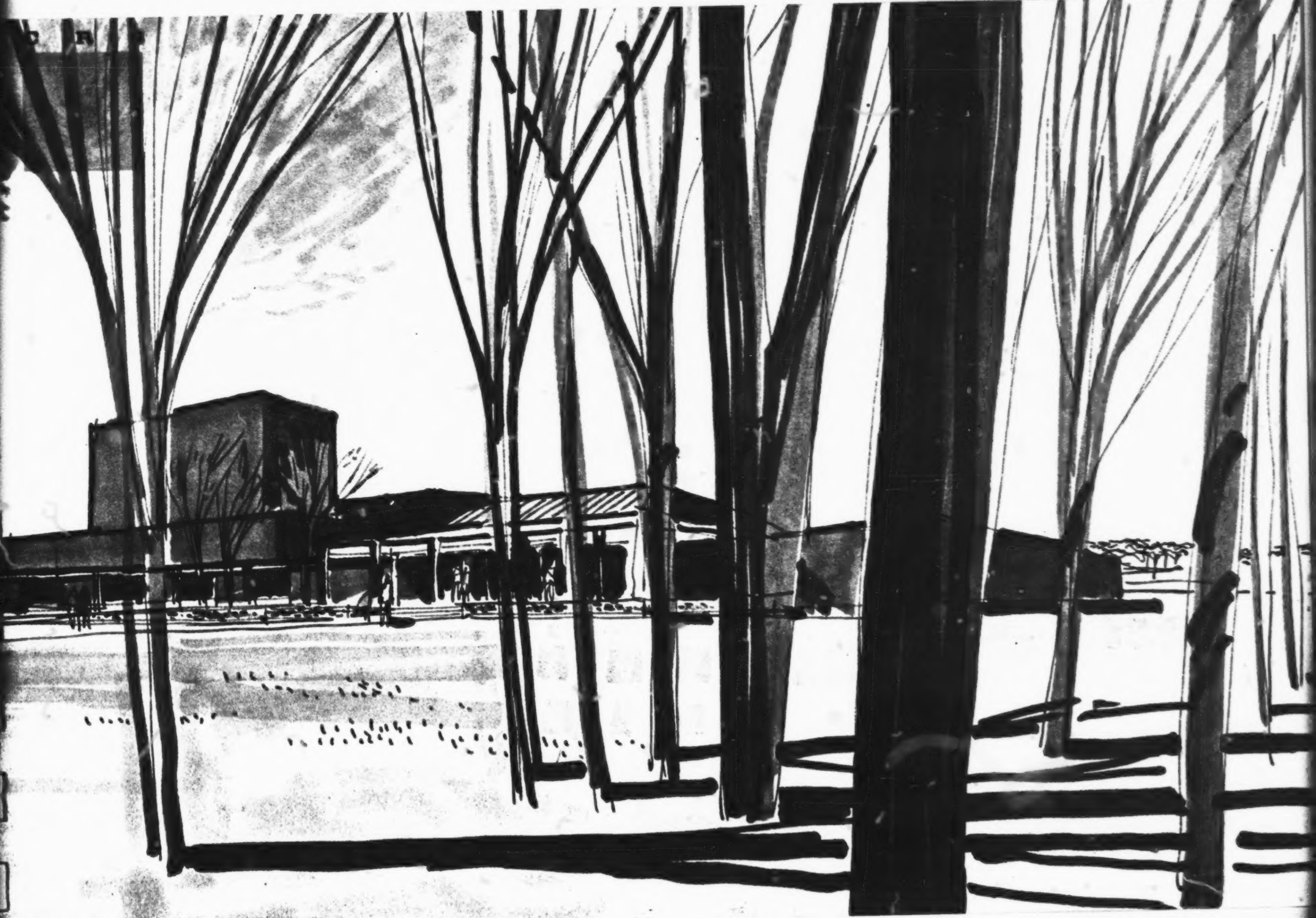
As is the case with other illustrations mentioned previously, these sketches were made during the early preliminary phase of the plan and may not, therefore, conform with the final recommended plan in every case. They do not, in any case, attempt to define the exact design of the buildings for Monroe Community College. Much refinement in the design process would be needed to accomplish this. Their purpose, rather, is to establish a general campus character which is both dignified and in keeping with the community as well as functional.

Various views typical of the recommended plan, as noted with the sketches, have been chosen to illustrate this campus character. The frontispiece is a general view of the main entrance.

CRS

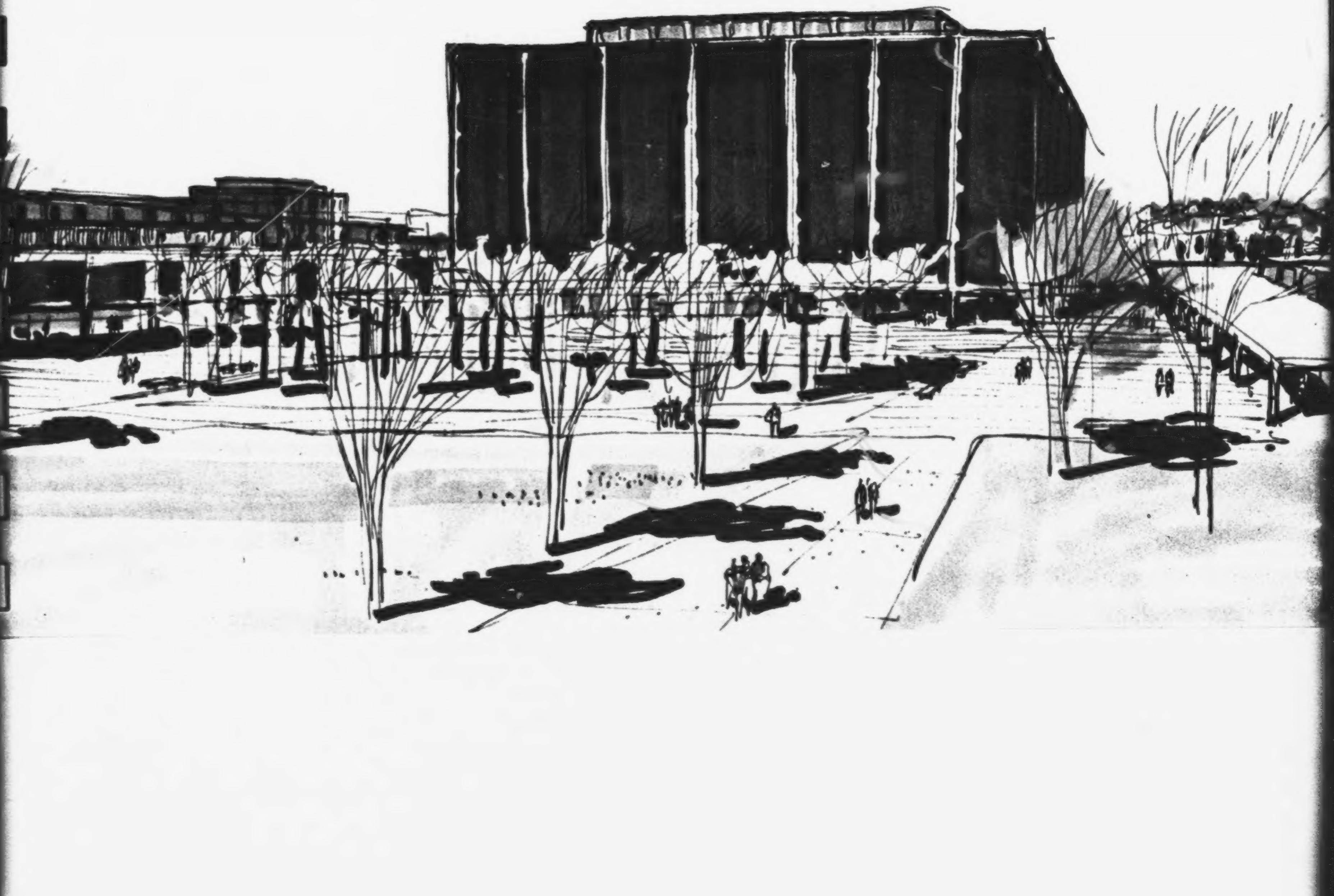


VIEW OF STUDENT CENTER AND LIBRARY
LOOKING WEST FROM DRAINAGE BASIN



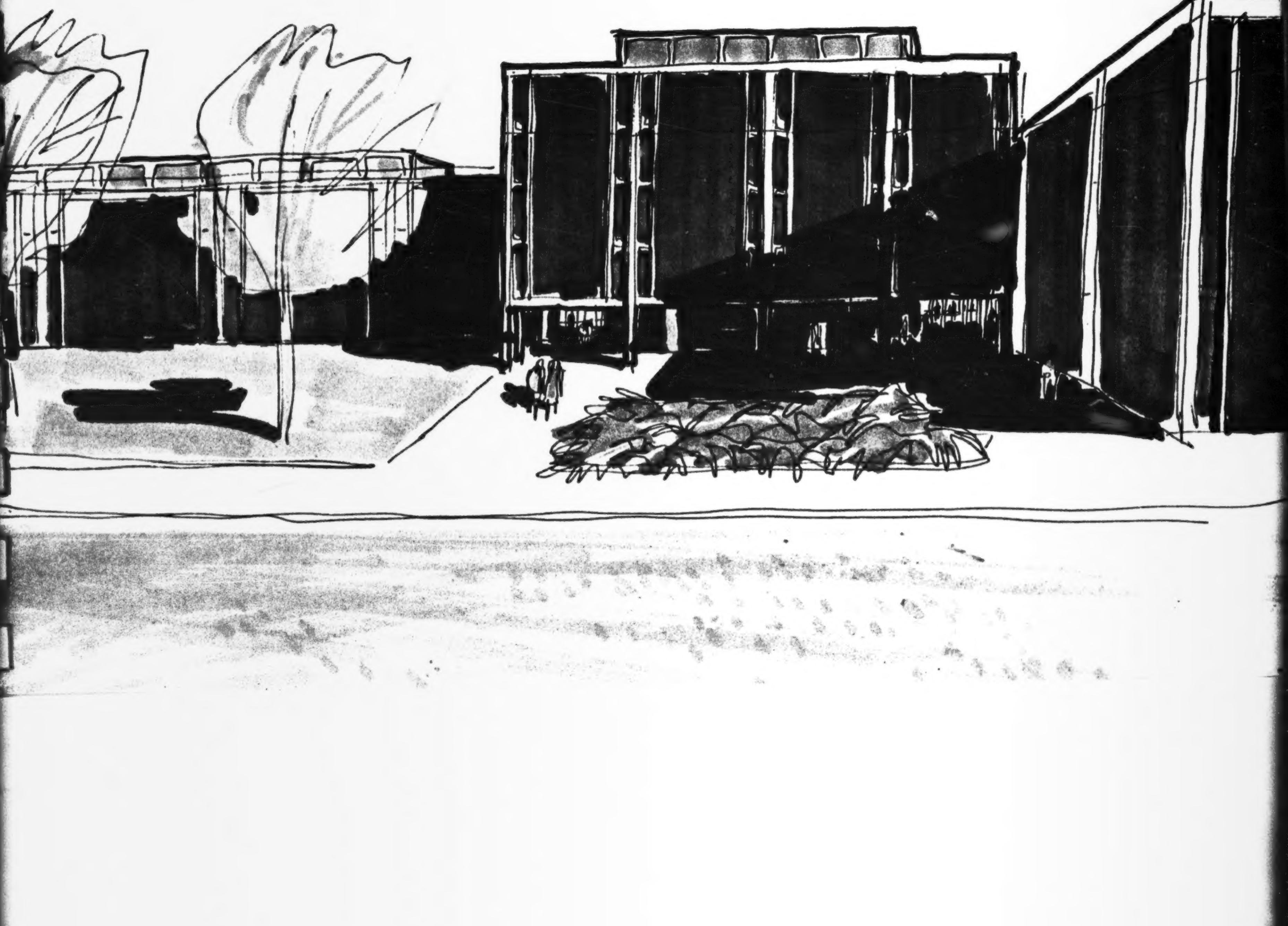
VIEW OF FINE ARTS COMPLEX AND AUDITORIUM
LOOKING NORTHWEST FROM PEDESTRIAN CAMPUS

C R S



VIEW OF LIBRARY LOOKING NORTH
ACROSS PEDESTRIAN CAMPUS

C R S



VIEW OF ENTRANCE TO UNIT "A" OFFICE
BUILDING LOOKING EAST FROM PARKING AREA

C R S

VIEW OF "THE WALL" IN WINTER
LOOKING WEST FROM PARKING AREA

COST ESTIMATE

The following is a summary of a cost estimate of all capital improvements for an enrollment of 4000 students. A detailed breakdown of this estimate is included in the Appendix.

Building Construction	10,801,480
Equipment and Furnishings	1,407,924
Total	12,209,404
Utilities*	1,300,000
Site Development	916,650
Total	2,216,650
Contingency 10%	1,322,209
Fees & Expenses	945,325
Total	2,267,534
Grand Total	16,693,588

* On-site utilities, not including off-site sewer extension. The cost of off-site sewer construction will be reclaimed in future years through refunding agreements and is therefore not considered a college capital improvement. See Appendix for Cost Estimate.

This plan by itself does not guarantee the development of a great campus. If it is to be effective, it must be interpreted, adjusted and implemented by dedicated people with vision and authority who understand and are willing to support the broad concepts of the plan. The president and his staff must be united in their support over a long period of time. When changes are made, and there will be changes, they must be weighed in terms of the basic plan concepts, and backed by judgment reached only after careful analysis of all the ramifications of the proposed change.

It is this "follow-through" that worries us as planners. We know from experience that there are many pitfalls --- the temptation to place expediency over principle, the tendency to place immediate needs above long range goals, the ever-present tyranny of dollar cost as distinguished from value received.

Specifically, we are concerned about two interrelated aspects of follow-through -- the architectural and planning aspects. For the plan to be successful, the most competent architects, landscape architects, and other design consultants must be employed for each project. One poorly designed building might easily negate the effect of a sensitively designed building group, and thus do irreparable harm. Your planners, therefore, urge the selection of only the most competent space-conscious architectural designers to execute building commissions. The best cost no more. They can make or break a good campus plan. Impress on them that scholars are sensitive to their environment, and that their architectural designs can stimulate or depress. Convince them that they are not only responsible for the space contained in the building shells, but that they are also responsible for what they do to the space surrounding and between the buildings.

The combination of a good campus plan and good architects is of the essence. One without the other will not do.

APPENDIX

SPACE REQUIREMENTS

				4000 Students			Added for 6000 Students		
Unit "A"	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net Area	Gross Area	No. Rooms	Net Area	Gross Area
Business Division									
Personnel									
Division Head					720				
Bus. Adm. Dept.									
Dept. Head					360				
Faculty			120	12	1,440		6	720	
Bus. Tech. Dept.									
Dept. Head					360				
Faculty			120	9	1,080		4	480	
Data Proc. Dept.									
Dept. Head					360				
Faculty			120	5	600		2	240	
Instructional Space									
Accounting Lab.	60	16	960	2	1,920				
Typing Lab.	60	16	960	2	1,920		1	960	
Shorthand-Trans. Lab.	60	16	960	2	1,920				
Office Mach. Lab.	25	24	600	1	600		1	600	
Data Proc. Lab.	25	40	1,000	4	4,000		2	2,000	
Class Rooms - General	30	16	480	5	2,400				
TOTAL Area - This Divn.					17,680	26,400		5,000	7,500
Humanities Division									
Personnel									
Division Head					720				
English Dept.									
Dept. Head					360				
Faculty			120	41	4,920		20	2,400	
Language Dept.									
Dept. Head					360				
Faculty			120	8	960		4	480	
Instructional Space									
English Classroom	30	16	480	10	4,800		5	2,400	
English Lang. Lab.	30	16	480	3	1,440		2	960	
Journalism Lab.	60	16	960	1	960				
Language Classroom	30	16	480	4	1,920		2	960	
Language Lab.	25	30	750	2	1,500		1	750	
Reading Imp. Lab.	30	16	480	2	960				
TOTAL Area - This Divn.					18,900	28,200		7,950	11,870
Social & Behavioral Sciences Division									
Personnel									
Division Head					720				
Faculty (includes Anthro., Eco., Geog., Hist., Pol. Sci., Psych., Soc., S.O.S., etc.)			120	16	1,920		8	960	
Instructional Space									
Soc. Stud. Seminar	20	16	320	2	640		1	320	
Soc. Stud. Classroom	30	16	480	12	5,760		6	2,880	
Psychology Lab.	30	22	660	2	1,320				
TOTAL Area - This Divn.					10,360	15,500		4,160	6,220
Unit "A" Joint Instruction Space									
Large Lecture Room	600	10	6,000	1	6,000				
Small Lecture Room	300	10	3,000	2	6,000		1	3,000	
Coat Room					1,000				
GRAND TOTAL - Unit "A"					59,940	89,500		20,110	30,090

				4000 Students			Added for 6000 Students		
Unit "B"	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net Area	Gross Area	No. Rooms	Net Area	Gross Area
Fine Arts Complex and Auditorium									
Personnel									
Dept. Head					360				
Faculty									
Speech			120	1	120		1	120	
Drama			120	1	120				
Art			120	2	240				
Music			225	2	450				
Arts and Crafts			120	1	120				
Instructional Space									
Speech and Drama									
Studio	25	64	1,600	1	1,600		1	1,600	
Storage Room			200	1	200				
Little Theatre	600	7	4,200	1	4,200				
Stage			1,600	1	1,600				
Dressing Rooms	6	50	300	2	600				
Lobby			1,200	1	1,200				
Set Storage			400	1	400				
Art									
Art Studio	24	35	840	2	1,680				
Art Storage			150	4	600				
Arts and Crafts Studio	24	35	840	1	840				
Arts and Crafts Storage			150	2	300				
Music									
Vocal Music Classroom	75	16.5	1,238	1	1,238				
Vocal Music Storage			200	1	200				
Instrumental Classroom	90	25	2,250	1	2,250				
Instrumental Storage			400	1	400				
Uniform Storage			150	1	150				
Practice Room	1	48	48	8	384				
Ensemble Practice Room	4	40	160	1	160				
Unit "B" Joint Instruction Space									
Classroom - General	25	22	550	2	1,100				
TOTAL Area - Fine Arts Complex					20,372	30,450		1,720	2,570
Auditorium									
Seating including stage	2,000	10						20,000	
Lobby	2,000	2						4,000	
Checkroom								600	
Orchestra								1,800	
TOTAL Area - Auditorium								26,400	39,500
GRAND TOTAL - Unit "B"					20,372	30,450		28,120	42,070
Unit "C"									
Sciences Division									
Personnel									
Department Head				1	720				
Chemistry Department									
Department Head					360				
Faculty			120	11	1,320		5	600	
Biology Department									
Department Head					360				
Faculty			120	24	2,880		12	1,440	
Physics Department									
Department Head					360				
Faculty			120	7	840		3	360	
Horticulture Faculty			120	1	120				
Instructional Space									
General Chemistry Lab.	24	50	1,200	4	4,800		2	2,400	
Chemistry Project Rooms	10	40	400	2	800				
Instrument Balance Rooms			300	1	300		1	300	
Chemistry Storage Rooms			600	2	1,200				
Organic Chemistry Lab.	24	50	1,200	1	1,200				
Chemical Tech. Lab.	30	75	2,250	1	2,250		1	2,250	
Chemical Tech. Storage			600	1	600		1	600	
Biology Lab.	24	50	1,200	4	4,800		1	1,200	
Biology Storage Rooms			600	2	1,200				
Biology Project Rooms	10	40	400	2	800				
Botany Greenhouse			200	1	200				
Animal Room			200	1	200				
Anatomy & Phy. Lab.	24	50	1,200	2	2,400				
Anatomy & Phy. Storage			600	1	600				
Microbiology Lab.	24	50	1,200	2	2,400				
Microbiology Storage			600	1	600				
Physics Lab.	24	50	1,200	3	3,600		1	1,200	
Physics Storage			600	1	600		1	600	
Classrooms - General	25	22	480	3	1,440				
General Science Lab.	30	25	750	1	750				
TOTAL Area - This Divn.					37,700	56,250		10,950	16,360

				4000 Students			Added for 6000 Students		
	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net. Area	Gross Area	No. Rooms	Net Area	Gross Area
Mathematics & Engineering Technology Division									
Personnel									
Division Head					720				
Mathematics Department									
Department Head					360				
Faculty			120	19	2,280		10	1,200	
Engineering Technology Department									
Department Head					360				
Faculty - Electrical			120	2	240		1	120	
- Electronics			120	5	600		3	360	
- Mechanical			120	10	1,200		5	600	
- Civil			120	1	120		1	120	
- Optics			120	3	360		1	120	
Instructional Space									
Mathematics Classrooms	30		480	7	3,360		4	1,920	
Mathematics Laboratories	30		960	2	1,920		1	960	
Power Laboratories	30	75	2,250	1	2,250				
Communications Laboratory	30	75	2,250	1	2,250		1	2,250	
Communications Laboratory Storage Room			600	1	600		1	600	
Electronics Laboratories	30	75	2,250	2	4,500		1	2,250	
Electronics Laboratory Storage Room			600	1	600		1	600	
Mechanical Tech. Lab.	30	75	2,250	2	4,500				
Mechanical Tech. Storage			600	1	600				
Drafting Laboratories	30	40	1,200	5	6,000		1	1,200	
Drafting Print Room			150	1	150				
Print Storage Room			100	1	100				
Construction Tech. Lab.	30	75	2,250	1	2,250				
Construction Tech. Storage			600	1	600				
Optics Tech. Lab.	30	75	2,250	1	2,250				
Optics Production Lab.	30	75	2,250	1	2,250				
Optics Production Storage			600	1	600				
Photography Lab.			500	1	500				
Photo Lab. Storage			150	1	150				
TOTAL Ares - This Divn.					41,670	62,250		12,300	18,370
Service Sci. & Tech. Division									
Personnel									
Division Head					720				
Nursing Dept.									
Dept. Head					360				
Faculty			120	25	3,000		12	1,440	
Faculty-Other Programs*									
Dental			120	2	240		1	120	
Medical Lab. Tech.			120	2	240		1	120	
Fire			120	2	240		1	120	
Police			120	3	360		1	120	
Recreation Supv.			120	1	120		1	120	
Family Life (Gen. Ed.)			120	2	240		1	120	
Ornamental Horticulture			120	2	240		1	120	
Food Tech.**									
Instructional Space									
Nursing Lab.	40	40	1,600	3	4,800		1	1,600	
Nursing Storage Rm.			100	3	300		1	100	
Nursing Seminar Rm.	20	16	320	1	320		1	320	
Dental Lab.	20	80	1,600	2	3,200		1	1,600	
Dental Storage Rm.			100	2	200		1	100	
Police-Fire Lab.	30	40	1,200	1	1,200				
Police-Fire Storage Rm.			150	1	150				
								6,000	8,960
TOTAL Area - This Divn.					15,930	23,800			
Unit "C" Joint Instruction Space									
Large Lecture Room	300	10	3,000	1	3,000		1	1,000	
Small Lecture Room	100	10	1,000	1	1,000		1	288	
Sci. Conference Room	24	12	288	3	864				
Lect.-Dem Prep. Room			450	1	450				
								1,288	1,923
TOTAL Area - Joint Space					5,314	7,900			
Coat Room					1,000				
								30,538	45,613
GRAND TOTAL - Unit "C"					101,614	151,700			

* Report to Division Head

** In Student Center

				4000 Students			Added for 6000 Students		
	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net Area	Gross Area	No. Rooms	Net. Area	Gross Area
Health & Physical Education									
Personnel									
Division Head					720				
Men's Physical Dept.							5	600	
Dept. Head					480				
Faculty			120	10	1,200				
Women's Physical Dept.							5	600	
Dept. Head					480				
Faculty			120	10	1,200				
Instructional Space							69	3,050	
Men -								300	
Lockers, Showers, Toilets				140 peak	6,250			500	
Dressing Room Storage					600				
Equipment Drying Room					1,000				
Training Room - First Aid					150				
							69	3,400	
Women -								300	
Lockers, Showers, Toilets				140 peak	7,000				
Dressing Room Space					600				
Teaching Stations									
Main Gym Floor	1200				11,800				
Gym Storage					600				
Badminton Courts	16			4	7,000				
Handball Courts	20			5	5,290				
Indoor Archery	10				2,100				
Fencing	20				2,100				
Wrestling	20				3,100				
Boxing	20				2,600				
Bowling	24				3,700				
Covered Tan Bark Field					12,500				
Gymnastics	30				3,000				
Gymnastics Storage					900				
Indoor Golf Driving	10				1,500			4,800	
								2,100	
Girls Gym								7,200	
Remedial Ex.									
3 Teaching Stations								22,850	32,643
TOTAL Area					75,870	108,400			
Student Center									
Director			180	1	180				
Staff Offices			120	2	240				
Reception & Secretarial					480				
Student Dining	1,200	12			14,400				
Faculty Dining	100	20			2,000				
Serving Areas					3,600				
Kitchen					8,400				
Food Tech Lab			1,200	2	2,400				
Food Tech Class Room	25	22	550	1	550				
Food Tech Faculty			120	3	360				
Snack Bar					1,500			6,500	
Student Lounge					1,800			1,800	
Music Listening Room					600				
Quiet Browsing Room					600				
Faculty Lounge					600				
Billard Room	24	50			1,200				
Table Tennis Room	16	50			800				
Student Offices			90	5	450				
Student Conference	30	20			600				
Photography Lab			500	1	500				
Photo Lab Storage Room				1	150				
Book Store	4,000	1.5			6,000				
Storage Expansion					3,000				
Game Rooms								2,000	
Meeting Rooms								2,400	
TOTAL Area					50,410	72,000		12,700	18,143

				4000 Students		
	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net Area	Gross Area
Library & Instructional Resources Center						
Administrative Offices						
Head Librarian					180	
Assoc. Librarian					180	
Reference Librarian					180	
Head Cataloguer					180	
Asst. Cataloguer					180	
Acquisitions Librarian					180	
Periodicals Librarian					180	
Circulation Librarian					180	
Secretary to Head Librarian					150	
Secretary to Assoc. Librarian					150	
Clerk to Head Cataloguer					150	
Clerk to Asst. Cataloguer					150	
Clerk to Acquisitions Librarian					150	
Clerk to Periodicals Librarian					150	
Clerk to Circulation Librarian					150	
Conference Rooms			300	2	600	
Prof. Staff Reading Rooms					300	
Cataloging Workroom					1,200	
Preparations and Proc. Room					1,200	
Receiving and Storage Area					1,200	
TOTAL					6,990	10,430
Reading Rooms						
Circulation & Public Catalog Area					1,400	
Reserve Reading					2,500	
Reference Reading					2,500	
Recreational Reading					2,500	
Periodical - Newspaper					2,500	
Storage for Periodicals & Newspapers					1,400	
Subject Suites (100,000 v.)					30,400	
Listening Center					625	
TOTAL					43,825	54,800
Related Library Services (Instructional Resources Center)						
Small Group Viewing Room					1,200	
IRC Adm. Offices (Incl. Secy)					500	
TV Office					200	
Audiovisual-TV Production Area					2,500	
Materials stacks, film, filmstrip racks storage & receiving area					3,150	
Conference previewing room for staff					345	
Darkroom area					180	
Slide-photo processing, mtg. & finishing					300	
TV and prop storage area					450	
TV Studio #1					1,000	
TV Studio #2					1,000	
TV Control Room film, recording chain broadcasting					800	
Sound Recording Room					225	
TV Rehearsal Room					300	
Microfilming, Proc & high-speed information retrieval systems room					2,500	
TOTAL					14,650	21,900
TOTAL - Area					65,465	87,130
Building Services						
Offices			150	4	600	
Secretary-Receptionist			225	2	450	
Receiving Room					2,000	
Bulk Supply Storage					2,000	
Repair Shops			1,000	3	3,000	
Women's Dressing Room					200	
Men's Dressing Room					200	
TOTAL AREA					8,450	10,560

				4000 Students		
	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net Area	Gross Area
Administration						
President's & Board Suite						
President's Office				1	280	
Secretary to President				1	120	
Administrative Asst. Office				1	180	
Reception Office				1	180	
Secretary Office & Files				1	180	
Board Room				1	375	
Study				1	96	
Lavatory				1	36	
Kitchen				1	36	
Vault				1	50	
Switchboard				1	100	
Mail Office				1	200	
TOTAL					1,833	
Publications & Research Suite						
Director's Office				1	180	
Secretary & Waiting Room				1	180	
Work Office				1	360	
TOTAL					720	
Vice-Pres. Faculty Personnel Services Suite						
Vice-President				1	180	
Secretary to V. P.				1	120	
Staff Room				1	180	
Dean of Instruction				1	120	
Coordinator of Lib. Arts & Sci.				1	120	
Coordinator of Career Programs				1	120	
Secretarial Pool & File Office					360	
Reception Room				1	120	
TOTAL					1,320	
Vice-Pres. Student Personnel Services Suite						
Vice President				1	180	
Secretary to V. P.				1	120	
Staff Room				1	180	
Assoc. Dean of Men				1	120	
Assoc. Dean of Women				1	120	
Secretarial Pool & File Offices					360	
Reception Room				1	120	
TOTAL					1,200	
Placement & Student Aid Suite						
Placement Office				1	120	
Student Aid Office				1	120	
Secretarial Pool & File Office					360	
Reception Room				1	120	
TOTAL					720	
TOTAL AREA - This Divn.					5,793	
Business Manager Suite						
Business Manager				1	180	
Asst. Business Manager				1	120	
Internal Auditor				1	120	
Conference Area				1	300	
General Clerical				1	420	
Storage & Files				1	100	
Reception & waiting room				1	120	
TOTAL					1,360	
Controller Suite						
Controller				1	120	
Budget Officer				1	100	
Chief Accountant				1	100	
Payroll Supervisor				1	100	
Machine Space				1	400	
General Clerical					1,400	
Storage & Files					350	
TOTAL					2,570	

				4000 Students		
	Seating Capacity	Square Foot Per Person	Each Space	No. Rooms	Net Area	Gross Area
Administration (continued)						
Bursar Suite				1		
Bursar					120	
Cashier Cages				1	320	
Storage & Files				1	200	
Vault					150	
TOTAL					790	
Personnel Suite						
Personnel Director				1	120	
General Clerical				1	80	
Files & storage				1	80	
TOTAL					280	
Data Processing Center						
Director				1	120	
Systems Analyst				1	80	
Machine Supervisor				1	80	
Machine Space				1	2,000	
Storage				1	400	
TOTAL					2,680	
TOTAL AREA - This Divn.					7,680	
Admissions & Registration Suite						
Director				1	180	
Asst. Dir of Admissions				1	120	
Admission Counselors			120	3	360	
Secretary & Files				1	120	
Reception Area				1	360	
Asst. Dir of Registration				1	120	
Secretary & Files				1	120	
Registration Work Room				1	960	
Vault				1	500	
TOTAL					2,840	
Counseling & Testing Center						
Director				1	180	
Counselor's Offices			120	7	840	
Secretary				1	120	
Reception, Library, Reading Rm				1	360	
Psychometric Room						
Psychometrist Office				1	120	
Testing Cubicles			30	8	240	
Typing-Clerical Office				1	120	
Storage & File Room				1	120	
Lavatory				1	36	
TOTAL					2,136	
Health Services Suite						
Office					180	
Examination Room					120	
Cot Rooms			100		200	
Secretary & Files					180	
Reception Room					120	
TOTAL					800	
Evening & Summer Session Suite						
Director					180	
Asst. Director					120	
Secretary & Files					120	
Lobby & Reception					180	
TOTAL					600	
TOTAL AREA - This Divn.					6,376	
GRAND TOTAL - Administration					19,849	39,698

COST ESTIMATE - BUILDING CONSTRUCTION, EQUIPMENT & FURNISHINGS

	Gross Area	Cost/ sq. ft.	Construction Cost	% for Furn. & Equip.	Furnishings & Equipment	Total
Administration	39,698	$20.50	$ 813,809	9%	$ 73,242	$ 887,051
Library	87,130	18.70	1,629,331	19.5	317,719	1,947,050
Student Center	72,000	20.50	1,476,000	11	162,360	1,638,360
Fine Arts Unit "B"	30,450	19.00	578,550	13	75,211	653,761
Unit "A" Offices & Joint Space	32,700	18.70	611,490	10	61,149	672,639
Unit "A" Instructional	56,800	16.50	937,200	12	112,464	1,049,664
Unit "C" Instructional	61,100	18.00	1,099,800	20	219,960	1,319,760
Unit "C" Offices & Joint Space	37,700	18.70	704,990	10	70,499	775,489
Unit "C" Instructional	52,900	17.50	925,750	20	185,150	1,110,900
Physical Education	108,400	17.80	1,929,520	6.5	125,418	2,054,938
Building Services	10,560	9.00	95,040	5	4,752	99,792
	589,438	$18.32	$10,801,480	13%	$1,407,924	$12,209,404

COST ESTIMATE - UTILITIES

On-Site Utilities (water, sanitary sewer, storm drainage, electricity, gas, steam)

Construction	1,300,000
Contingency	80,000
Fees and Expenses	200,000
Total	1,580,000

Off-Site Sewer Extension

Construction	520,000
Contingency	45,000
Fees and Expenses	135,000
Total	700,000

Grand Total	2,280,000

COST ESTIMATE - SITE DEVELOPMENT

	Quantity	Unit Cost	Total Cost
Drainage Basin Excavation	85,000 c.y.	.65	55,000
Strip Top Soil	36,000 c.y.	1.00	36,000
Spillway Struction	-	l.s.	5,000
Asphalt Drives	56,000 s.y.	2.80	157,000
Asphalt Parking Area	78,000 s.y.	2.80	218,000
Concrete Curb & Gutter	43,000 l.f.	3.10	133,000
Concrete Walks	250,000 s.f.	.50	125,000
Running Track	-	l.s.	40,000
Tennis Courts	8 ea.	2,000.00	16,000
Play Fields	-	l.s.	8,000
Planting	15 a.c.	2,000.00	30,000
Grading	50,000 c.y.	1.00	50,000
			873,000
Location Factor	5%		43,650
Total Construction Cost			916,650